HOSPITAL Topics

THE NEWS MAGAZINE FOR HOSPITALS

RAY E. BROWN (see page 3)

Guide to Atlantic City
page 43

Hospital Electrical Problems
page 15

Standards for Receiving Federal Funds
page 20

BUYER'S GUIDE
Page 50

SEPTEMBER | 1955

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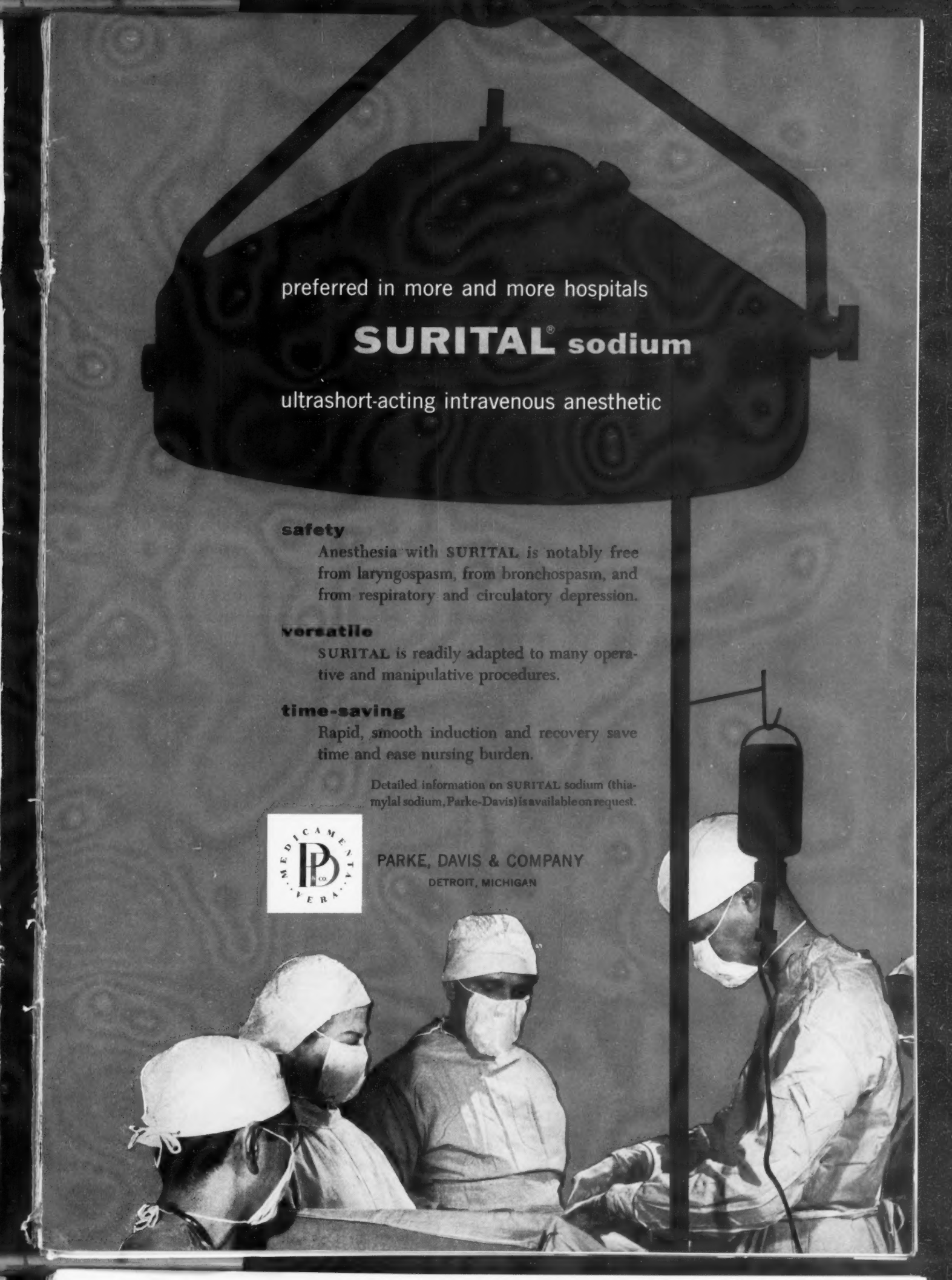
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HOSPITAL Topics

The News Magazine for the Hospital Staff

SEPTEMBER 1955, VOL. 33, NO. 9

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OPERATING ROOM

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PERSONALITY OF THE MONTH

Ray E. Brown, who will be installed as president of the AHA in Atlantic City this month, is a man who is thoroughly acquainted with heading organizations in the hospital field. Presently superintendent of the University of Chicago Clinics and Hospitals, he began his career in 1940 as superintendent, Shelby (N.C.) Hospital. In 1942 he went to Winston-Salem to become superintendent, North Carolina Baptist Hospital and professor of hospital administration at Bowman Gray School of Medicine, Wake Forest College.

He has been at the University of Chicago since 1945 and is director of the graduate program in hospital administration there.

During the last 10 years Mr. Brown has been a member and officer of numerous organizations. To name just a few, he has been president of the University of Chicago Settlement; member of the Commission to Survey University Education in Hospital Administration; chairman of the Committee on Institutes of ACHA; president of the Chicago Hospital Council; trustee of the Illinois Hospital Association; and is a member of the University Hospital Executives Council.

He is also a fellow of the American Public Health Association and the American College of Hospital Administrators.

Mr. Brown is married and the father of three daughters. His hobbies are book collecting and golf. He claims to have the largest personal collection of books on medical economics in the country. On the subject of golf Mr. Brown says, "I have no claims in that connection."

prescription pad

New Crystalline Corticosteroid

Meticortelone, the second new crystalline corticosteroid, possesses hormonal properties and antirheumatic and anti-inflammatory effectiveness similar to those of Meticorten. Available data support its effectiveness in intractable asthma and certain dermatoses.

For the present its use in conditions other than rheumatoid arthritis awaits the confirmation of clinical studies in progress.

Average dosage is 20 to 30 mg. (four to six tablets) a day, gradually reduced until maintenance dosage of 5 to 20 mg., is reached. The total 24-hour dose should be divided into four parts administered after meals and at bedtime. Patients may be transferred directly from hydrocortisone or cortisone to Meticortelone without difficulty.

Meticortelone is supplied in 5 mg. half-scored, buff-colored tablets, in bottles of 30 and 100.

Pediatric Parenteral Solutions

A new group of pediatric parenteral solutions and coordinated services have been introduced by Mead Johnson & Co., providing the first complete parenteral therapy program designed especially for infants and children.

There are 31 solutions in the group, all packaged in special pediatric sizes of 125 cc., 250 cc., and 500 cc. Several are standard and specialty solutions in the regular Mead adult parenteral line, and others are solutions prepared especially for pediatric use.

The smaller-sized bottles are designed for convenience, economy, and extra safety—to reduce the possibility of overdosage.

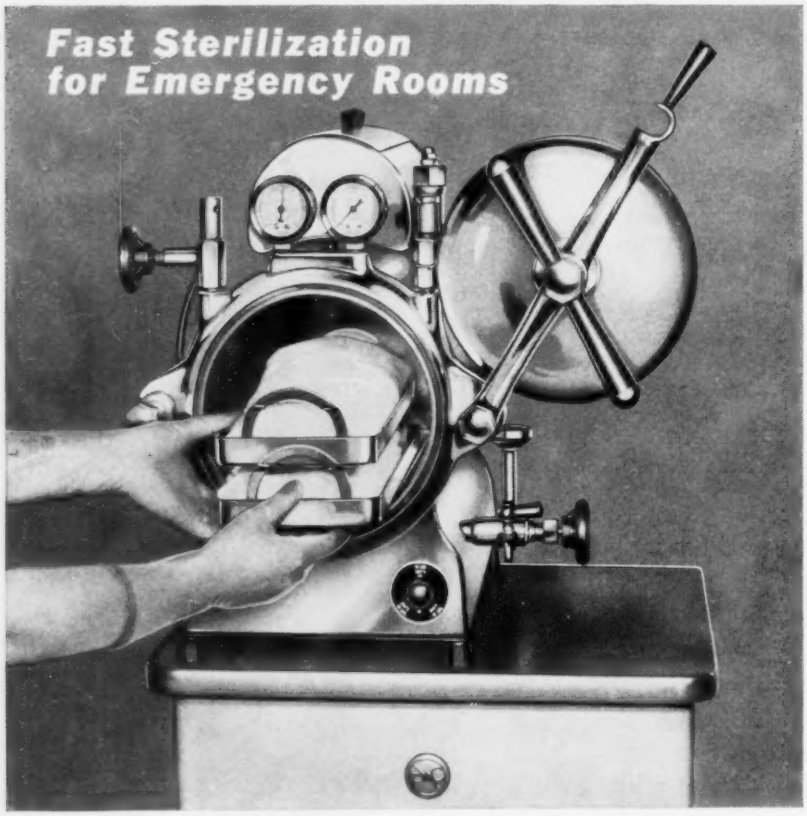
New burette-type bottles (see picture above), designed to provide greater safety and convenience, are elongated to allow more minute measurement of fluid level. Calibrations are spaced at 10 cc. and 20 cc. intervals to allow more accurate measurement and conform with suggestions collected from leading children's hospitals throughout the country. Most unique feature is the "memo-margin" which provides space for the patient's name, room number, and dosage instructions — another safety factor to help prevent human error, Mead states.

New Polio Vaccine Grown in Human Tissue

Now it is possible to grow polio virus for vaccine in large quantities without the use of expensive monkey kidneys, according to three University of California medical researchers.

The method uses the inner lining of human placental tissues as the substance in which the virus can be grown.

The experimenters, Elsa M. Zicter, Jorgen Fogh, and Thelma H. Dunneback, successfully cultivated all three types of polio virus with this material.



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clinical notes

Superior Excretory Urograms Reported with Hypaque

Excretory urograms produced by Hypaque, a new contrast agent, showed a nearly 100 percent increase in quality over a control group, according to a report by Walker, Erickson, Taylor, and Mason, in the *Bulletin of the Mason Clinic* (9:1, 1955).

Hypaque was given to 104 patients, while a similar number of cases received another widely used contrast medium. Eighty percent of the excretory urograms in the Hypaque series demonstrated excellent or good definition of the kidneys, compared with 38 percent in the control group. Similar high quality diagnostic films of the ureters were obtained in 67 percent of the Hypaque cases, compared with 38 percent of the controls, and in 57 percent of the bladders visualized with Hypaque, compared with 19 percent of the controls.

The paucity of poor examinations of the kidneys and ureters using Hypaque is particularly notable, the authors say.

There were no clinically significant objective or subjective reactions observed during the study with Hypaque, and no significant vasomotor disturbances. The same good results are cited by the authors in a subsequent study of 200 excretory urograms.

Treating Secondary Bleeding after Tonsillectomy

Tonsillectomy is followed by complications more frequently than is generally realized, and causes more postoperative deaths than any other throat operation, according to McLaurin and Raggio, writing in the *Journal of the Louisiana State Medical Society*, 107:91 (March, 1955). Poor technic and the custom of considering adenotonsillectomy as minor surgery account for large numbers of these complications and fatalities, they point out. Hemorrhage is the most frequent complication.

The authors doubt that remote tonsillectomy has anything to do with the development of poliomyelitis, and cite statistics to support their theory that antibiotics have no part in raising the incidence of post-tonsillectomy bleeding.

In children under 20 months, only the adenoids are removed, and adenoidectomy precedes tonsillectomy in all patients. The usual solid diet is promptly resumed.

Sulfathiazole gum is chewed for 30 minutes every four hours during the day. The authors routinely treat secondary bleeding with an intramuscular injection of double-strength USP posterior pituitary extract. They suggest the use of Aspergum if the throat is painful. While the salicylates lower the prothrombin time of the blood, this effect is not likely to occur if aspirin is taken in quantities after tonsillectomy.

In 25 consecutive cases given aspirin or Aspergum postoperatively, the prothrombin time was never below 80 percent of normal. In most cases it was between 90 and 100 percent of normal.

The authors feel that most cases of post-tonsillectomy bleeding are the result of infection, and they never operate if there has been a recent infection, sore throat, or cold, or if there is a temperature elevation.

(Continued page 87)

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HOSPITAL Topics
The News Magazine for the Hospital Staff

VOL. 33, NO. 9
SEPTEMBER 1955

Scanning the News

Color Playing Role In Hospital Therapy

Someday color prescriptions to hospital patients may be just as common as pills or shots.

For instance an excitable person might be suffering from neurosis—a blue room for him to quiet him.

If a patient is depressed— surround him with soft warm colors in reds and pinks.

Bright and gay colors for pediatrics; maternity floor warm and bright, and the other rooms subdued and restful, as gray-green for surgery.

Color scientists have discovered a favorite color of the "salt of the earth" type is brown; the martyr, the crusader, and the active person is red; the well-balanced orderly individual is green; the emotional type leans to strong yellows and orange, the cold, reserved standoffish individual likes blues.

The medical profession is accepting the idea that people's health is influenced by emotion, according to Roy Johnson, faculty member Northwestern University.

Milk is Necessary Brain Food—Professor Says

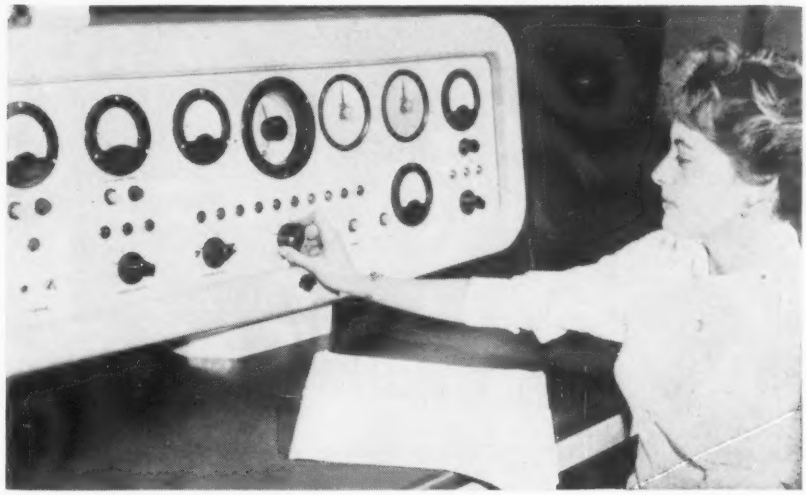
Syuzo Naka, M.D., professor of medicine, Kyushu University, Fokuoka Japan, says specialists in nutrition have not paid enough attention to the relation of mother's milk to the development of the human brain.

Dr. Naka claims it is the mother's milk that enables the brain to grow outside the body after birth.

Drugs Sterilized in Atom Smasher

Down in a basement lab in Kalamazoo, Mich. a modified atom smasher is quietly killing disease-causing bacteria with electron bullets that whiz along at 175,000 miles a second.

This electron bombardment is being used to sterilize an eye ointment that Upjohn Co. will introduce this month. Upjohn's ointment is the first radiation-sterilized drug offered for sale.



Pictured above is the radiographer's control desk of the 15 million-volt x-ray machine that has just been installed in St. Bartholomew's Hospital, London. It is called a linear accelerator and it produces x-rays at a high intensity—about 3,000 roentgens a minute from a yard away. This makes it possible to investigate two new radio-therapy technics—electron and neutron therapy.

The company has completed clinical tests on the drug and has U.S. Food and Drug Administration approval for its release. Upjohn says they will consider radiation as a method of sterilization for all its new products.

Lipoid Pneumonia Frequency Not Reduced

Lipoid pneumonia, caused by aspiration of animal, vegetable or mineral oil, is a preventable disease, but no effort has been made to reduce its frequency, a Washington, D.C. radiologist has reported.

According to Aubrey O. Hampton, M.D., senior attending radiologist, Garfield Memorial Hospital, lipoid pneumonia stems from oil nose drops administered for upper respiratory infections, and mineral oil for constipation. Because these oil remedies are still prescribed there is a need for recognition of the condition.

Prevalence of lipoid pneumonia is not known because no standard criteria have been developed for establishing diagnosis.

No therapeutic measure now known is of help in evacuating the oil from the lungs. After the fibrotic changes have occurred, no alteration to normal is possible, Dr. Hampton reported.

Ultrasonic Therapy

High frequency sound waves are bringing spectacular relief to veterans suffering from painful amputation stumps, rheumatic diseases, and some nerve and muscle conditions, the VA reports.

Veterans Administration was the first to use ultrasonic therapy in this country. They have installed the equipment in nine hospitals, and one regional office.

The treatment involves the use of an electrical apparatus in which a quartz crystal oscillates between 800,000 and 1,000,000 cycles per second in a small soundhead. High frequency sound waves are directed into the body through a coating of heavy mineral oil on the skin or underneath water.

(Continued on page 67)

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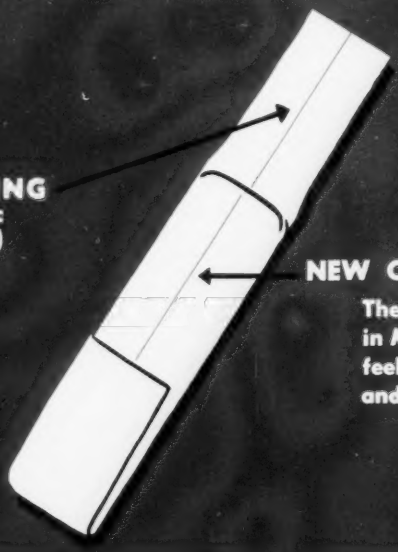

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News Briefs at Press Time

AMA PLANNING FIGHT AGAINST DISABILITY INSURANCE

An all-out campaign by the AMA against the inclusion of disability insurance under social security is expected to be launched soon. It may involve greater expenditures than the Whitaker-Baxter drive against compulsory health insurance.

Administration policy on the proposal for inclusion is not clear. Although retiring HEW Secretary Hobby testified against it just before leaving office, Secretary Folsom said in his first public address since his appointment that "social security cannot remain static." Administration may not want to oppose the plan actively in an election year.

UMW SPENDS NEARLY $43 MILLION FOR MINERS' MEDICAL CARE

The United Mine Workers Welfare and Retirement Fund spent $42,773,658.47 for medical and hospital care in the fiscal year which ended June 30. There were 95,824 hospitalization beneficiaries who received 1,605,486 days of care.

More than 51,000 dependents accounted for $20,902,000 of medical and hospitalization benefits.

AEC COMMITTEE FORMED TO ADVISE ON RADIATION PROTECTION STANDARDS

The Atomic Energy Commission has named a nine-man advisory committee for final drafting of standards for protection against radiation. Committee members include state health commissioners Daniel Bergsma, New Jersey, Roy L. Cleere, Colorado, and Albert E. Heustis, Michigan, and engineering or legal representatives of state governments of California, Maine, Indiana, Massachusetts, New York, and Pennsylvania.

VA CONSOLIDATES MEDICAL ADVISORY COUNCILS

The VA has merged its two medical advisory boards to eliminate overlapping of functions. The Council of Chief Consultants has been absorbed by the Special Medical Advisory Group.

Six of the specialists from the council are now members of the expanded SMAG. Other former council members will remain as consultants to the VA in their various specialties.

HEW'S MEDICAL RESEARCH PROGRAM TO BE STUDIED BY COMMITTEE

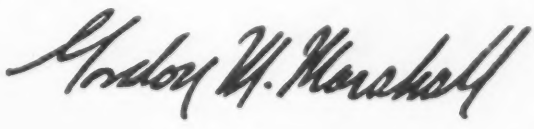
Expenditures by the Department of HEW for medical research will be studied by a special committee, appointed by the governing board of the National Science Foundation.

Study, requested originally by Secretary Hobby and endorsed by her successor, Secretary Folsom, will center on $100 million annual research program of National Institutes of Health, but will also include programs of PHS Bureau of State Services, Office of Vocational Rehabilitation, and Children's Bureau. Committee chairman is C. N. H. Long, M.D., chairman, physiology department, and former dean of medical school, Yale University.

BRIEFEST BRIEFS

PHS will conduct examinations for medical and physical therapy officers November 15-17, at central points throughout the country. . .$30 million for purchase of Salk vaccine is being allocated among 56 states, territories, possessions, and the District of Columbia, with New York getting largest sum—$1,727,103. . .Results are encouraging in clinical trials at NIH of simplified method of determining heart damage through detection of transaminase in the blood.

The TOPICS staff hopes to see you at the AHA convention in Atlantic City. Extensive use of round-tables this year should give the average conventioner a better chance to participate. If you can't get there, see our comprehensive report in the October issue.



Calendar of Meetings

SEPTEMBER

6-16 Chicago Institute for Hospital Administrators, International House, University of Chicago

12-15 International College of Surgeons Convention Hall, Philadelphia, Pa.

12-16 Chicago Advanced Institute for Hospital Administrators, Chicago

17-19 American College of Hospital Administrators, Traymore Hotel, Atlantic City

19-22 American Hospital Association Traymore Hotel, Atlantic City

19-22 American Association of Nurse Anesthetists, Ritz-Carlton Hotel, Atlantic City

OCTOBER

1- 6 American Academy of Pediatrics Palmer House, Chicago

3- 7 American Association of Medical Record Librarians LaSalle Hotel, Chicago

5- 7 Montana Hospital Association Sidney, Montana

6- 7 Mississippi Hospital Association Hotel Buena Vista, Biloxi

11-12 South Dakota Hospital Association Yankton, S. Dak.

12-13 Indiana Hospital Association Student Union Building, Indianapolis

13-14 Nebraska Hospital Association Cornhusker Hotel, Lincoln, Neb.

17-18 Oregon Association of Hospitals Bend, Oregon

18-21 American Dietetic Association Auditorium, St. Louis, Mo.

19-20 Washington Hospital Association Davenport Hotel, Spokane

20-21 Operating Problems for Small Hospitals Institute, Hilton Hotel, Albuquerque

26-28 California Hospital Association San Diego Hotel, San Diego

29-30 American College of Osteopathic Hospital Administrators Annual Meeting, Statler Hotel, Washington, D.C.

30-Nov. 2 American Osteopathic Hospital Association, Hotel Statler, Washington, D. C.

30-Nov. 4 American College of Surgeons Conrad Hilton Hotel, Chicago

NOVEMBER

7- 9 Maryland-District of Columbia-Delaware Hospital Association, Shoreham Hotel, Washington, D.C.

7- 9 Association of Military Surgeons of the U. S., Hotel Statler, Washington, D. C.

13-17 American Surgical Trade Association Statler Hotel, New York City

7-11 Institute on Dietary Department Administration, Benjamin Franklin Hotel, Seattle, Washington

14-18 American Public Health Association Municipal Auditorium, Kansas City

14-18 Accounting & Business Practices for Small Community Hospitals Benjamin Franklin Hotel, Seattle

16-18 American Association of Blood Banks Palmer House, Chicago

17-19 Arizona Hospital Association Santa Rita Hotel, Tucson, Ariz.

19-21 American Surgical Trade Association Semi-Annual Meeting and Technical Exhibit, Conrad Hilton Hotel, Chicago

21-22 OR-CSR Institute, Battenfeld Auditorium University of Kansas Medical Center, Kansas City, Kan.

29-Dec. 2 AMA Clinical Session Boston, Mass.

DECEMBER

5- 8 American College Hospital Administrators 11th Fellows' Seminar, Evanston, Ill.

12-14 Missouri Hospital Association Hotel Jefferson, St. Louis, Mo.

12-14 American Academy of Obstetrics-Gynecology, Conrad Hilton Hotel, Chicago

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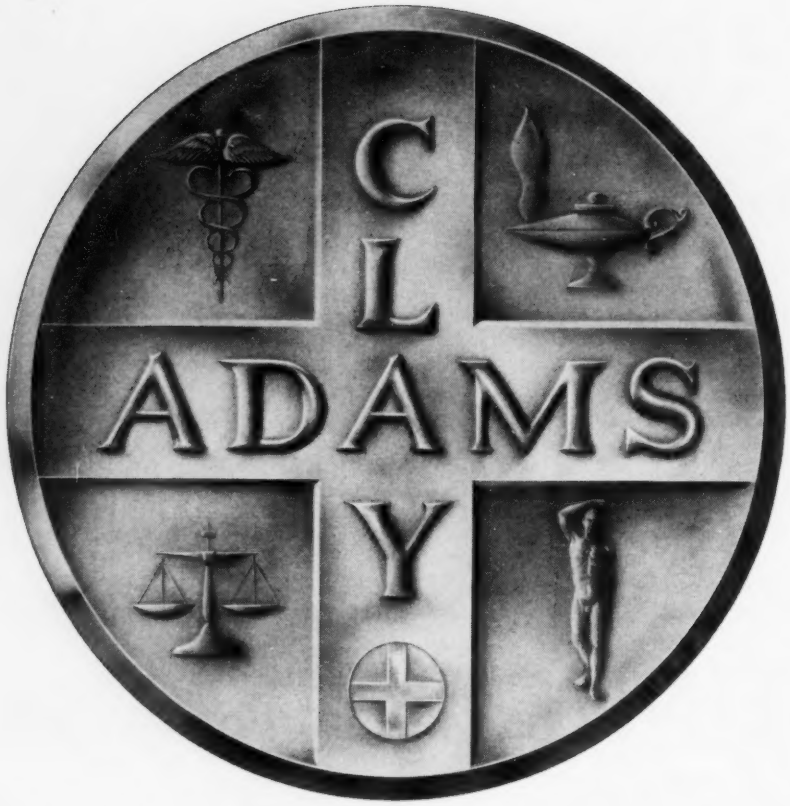

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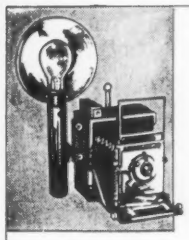
Right: W. V. Street, interior decorator, and Mrs. Mildred Bauer, R.N., assistant director of nurses, takes a moment off from a hectic schedule to sit in the oak-paneled lobby.

Below: Mrs. André Price, R.N., operating room supervisor, tests the new operating room light as equipment is installed in the surgical area. The department also has an orthopedic room, a genito-urinary room, and an x-ray room with lead lined walls. All rooms here are air conditioned and are done in green tile.



Hospital Topics .....Goes Calling

. . . on Alfred E. Riley
Administrator
Community Memorial General Hospital
La Grange, Illinois

Community Memorial General Hospital is a direct result of Chicago's rapid suburban growth. Plans for the 100-bed hospital were begun two years ago, when the need for hospital facilities became urgent in the western suburb.

Opened officially on August 1, the ultra-modern hospital serves the area within a 25-mile radius of La Grange. When HOSPITAL TOPICS paid a pre-opening-day call, there were three maternity patients and three babies. Staff members were still getting equipment in place and attending to the hundreds of last-minute details which have to be checked before opening.

To make living conditions for hospital personnel, interns and residents as pleasant as possible, two-story homes are being built. Each will house seven persons, and will have a complete kitchen, dining room, living room, recreation room, patio, and seven bedrooms. Three of these structures will be ready by October. Eventually the hospital will build seven more.

The one-story hospital is built in the shape of a square, with the area within the square serving as a garden. The operating room suite and central supply department are on a second level over one section of the building.

(Continued on next page)

Below: Mr. Riley (left) checks last-minute details with the contractors installing equipment in the orthopedic room.

Members of the recovery room staff ready the room and help install equipment. They are (l. to r.) Mrs. Barbara Urick, R.N., head of the recovery room; John Tomachevsky, R.N., Lillian Anderson, practical nurse, and Mrs. Virginia Henry, nurse's aide. The air conditioned room has facilities for six patients. Suction and oxygen apparatus are available here as well as in all other rooms.

Left: Nurse's aides ready rooms for patients. All rooms are semi-private, have sinks at the bedside, and radios with pillow speakers. The rooms may be closed off with folding sliding doors to give patients privacy.

Right: This infant was one of the first occupants of the 20-bassinet nursery. The nursery, delivery room, and labor rooms are air conditioned.

Mr. Darnell

Hospital Electrical Problems

By McDonald Darnell
Engineer Officer, VA Hospital, Louisville, Ky.

Many electrical problems are involved in providing the hospital with safe and adequate electrical service. The responsibility for efficiently and economically maintaining and operating the electrical facilities is one of the many duties of the hospital engineer. Briefly, his primary objective in performing these duties is to insure safe and uninterrupted service at the lowest possible cost.

We will not attempt to provide specific instructions concerning problems such as making repairs following a breakdown, but will endeavor to assist in the prevention of many electrical problems, with their attendant costs, by the application of advance constructive planning in the installation, maintenance, and operation of electrical facilities.

The hospital engineer, in cooperation with management, is responsible for the establishment and enforcement of certain rules and regulations governing the installation and utilization of electrical services within the framework of established standards. Consideration should be given, of course, to safety, eliminating unauthorized consumption of electrical energy, and maintaining standards relative to authorized lamp sizes and approved appliances. This responsibility also includes the following essential duties:

(a) Determining that the entire electrical installation is accomplished in accordance with the National Electrical Code, latest edition, and local code requirements. In this connection, see especially Section 15, "Electrical Hazards," in the National Safety Council's *Manual for Industrial Operations*. This manual, which should be in the hands of the chief electrician, as well as the hospital engineer, may be obtained from the National Safety Council, 425 N. Michigan Ave., Chicago 11.

(b) Insuring that when new installations are made or existing circuits changed, applicable requirements of national and local wiring codes are always observed, giving strict attention to the type of building construction, the size and distribution of electrical load, exposure to dampness or explosive atmospheres, location of equipment, and various other factors.

(c) Giving the most careful attention to providing maximum safety for preventing possible personal injury or property damage in the future maintenance and operation of the facilities.

Experience has taught most of us that a planned program of preventive maintenance is essential to provide economical and dependable electrical service throughout the hospital at the lowest possible cost. Some of the engineer's specific duties in this program are to:

(a) Determine that the electrical staff is provided with a copy of the National Electrical Code, latest edition, as published by the National Board of Fire Underwriters, together with applicable local codes governing electrical wiring and apparatus. Attention should also be given to NFPA Bulletin No. 56, "Safe Practice for Hospital Operating Rooms," and NFPA Quarterly No. 48-2, "Advances in Operating Room Safety," both of which are published by the National Fire Protection Association, 60 Batterymarch St., Boston 10.

(b) See that the chief electrician is provided with the necessary proper protective equipment, such as rubber gloves, rubber boots, safety belts, protective clothing, and "hot line" tools, if his duties require their use.

(c) Arrange for the chief electrician to be provided with necessary tools and electrical testing instruments, including:

(1) Portable indicating volt meter
(2) Portable ammeter, including clamp-on type
(3) Portable recording volt meter
(4) Portable recording ammeter
(5) Portable recording watt meter
(6) Light meter
(7) An ohmmeter and "megger"
(8) Tachometer.

(d) Conduct regular periodic inspections and take necessary corrective action to insure the utmost safety for patients and employees in the matter of exposed wire, capacity of fuses, nonenclosed switches, unlocked doors of live front panels, and grounding of electrical equipment; provide and follow safety instructions for the operation of electrical equipment. For instance, an electrician's helper or unauthorized person should not be permitted to enter the high voltage vault alone.

(e) Inspect the grounding of all conduits, metal raceways, cable armors, and metal cases of fixed electrical equipment, so that if the metal enclosure should come into contact with any of the circuit wires within it, no dangerous current would be passed to a person who touched the enclosure, since if grounded it would be kept at ground potential. The path to ground must be as low in resistance as possible, as otherwise sufficient current may not flow to open an overcurrent protective device and clear the fault. In that case, a voltage build-up would occur on metallic parts, with consequent hazard. Metallic enclosures are commonly grounded through the grounding conductor used for the service neutral.

(f) See that portable electrical equipment has exposed noncurrent-carrying metal parts grounded in accordance with the National Electrical Code and local codes. Careful attention should be given to grounding portable equipment used where dampness exists, with x-ray apparatus, and where equipment operates at more than 150 volts to ground.

(Continued on next page)

(g) Inspect the transformer station monthly, including oil level of transformer and circuit breakers. Be sure that adequate grounding is provided for all exposed metal parts, including guard rails and metal fence.

(h) See that lightning arrestors are inspected thoroughly in the early spring, before the start of lightning season. Check the condition and resistance of ground connections. The lightning arrestor grounds should preferably be provided by a buried water main with a resistance not exceeding five ohms.

(i) Arrange with the serving utility company to check the transformer and switch oil annually. It is recommended that the oil be reconditioned or changed if dielectric strength tests less than 18 kilovolts.

(j) Check oil level in the distribution transformers at least every three months, and replace leakage and evaporation loss promptly. Also, check to see that the transformer temperatures do not exceed 90°C. Ground connections to distribution transformer cases should be inspected. The resistance of an artificially-driven ground in these instances should not exceed 25 ohms.

(k) Make frequent inspections to determine condition of building wiring. These inspections often will eliminate many fire hazards, by revealing defective wiring and the use of oversize lamps and improper fuses.

(l) Establish and maintain a strict, regular schedule for inspecting and maintaining all electric motors. Frequency and thoroughness of inspections of electric motors depend on such variable factors as continuity of operation, surrounding conditions, equipment driven, and motor design. Provide running current protection for all motors.

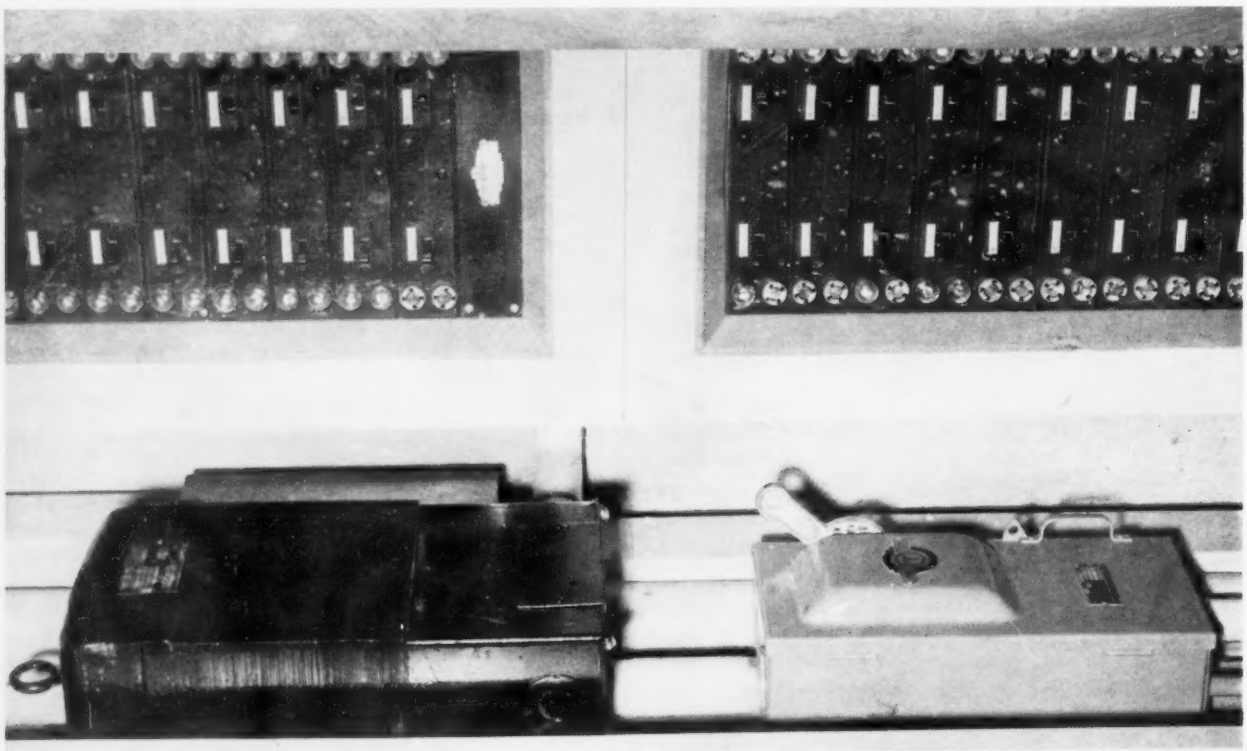
(m) Inspect the distribution system after each electrical outage, covering all wires, poles, transformers, and auxiliary equipment. Repeated circuit outages during storms may indicate inadequate wire spacings, cracked insulators, excessive sage, or tree interference.

(n) Establish adequate and effective control for the operation and use of all elevators. Many hospitals have considerable elevator trouble which, in most instances, can be traced to improper maintenance. Periodic inspection should be established to insure the utmost safety for all component parts of the elevator. Following each inspection, the number of major repairs can be reduced and considerable time saved if minor adjustments and repairs are made promptly.

Only qualified personnel should adjust or repair the elevator equipment. In case of need for major elevator repairs, it is recommended that the hospital give a contract to a reputable elevator company, rather than have hospital personnel attempt the repairs. At most hospitals it has proved more economical and satisfactory to contract for the full maintenance of elevators with a reputable company.

A great many basic problems arise from the installation of additional electrical equipment which eventually tends to overload existing feeders, branch circuits, and related distribution equipment. The use of the testing equipment previously mentioned will make it possible to determine whether circuits are becoming unbalanced or overloaded, or both. Generally speaking, the voltage drop in circuits should not exceed three volts for power circuits and one volt for lighting circuits. However, the wiring and related equipment in any circuit should, as previously stated, conform with the National Electrical Code, as well as local wiring codes.

A common problem involves the need for increased lighting intensity at various places within the hospital. In many instances, it is possible to provide up to approximately 100 percent more foot-candles of lighting by using fluorescent fixtures instead of certain obsolete incandescent fixtures, without increasing the wattage on the cir-



Above: Electrical closet for hospital, showing: Isolation transformer (10 KVA, single-phase air-cooled 120/120 volt, 60 cycle) for supplying ungrounded secondary to single phase panels; operating suite branch circuit fuse panels (doors shown open) for providing ungrounded 120 volt branches to operating rooms, and safety switch for isolation transformer primary. Ground detection unit located in electric closet is not shown.

cuits. No branch circuits should be installed which use wire smaller than gauge No. 12.

Improved lighting will doubtless be obtained if one can establish a quarterly schedule of inspections to determine that (a) fixtures and lamps are clean; (b) burned-out or blackened lamp bulbs are promptly replaced, and (c) lamp bulbs are of proper voltage and wattage.

Dark or dirty walls and ceilings greatly decrease lighting efficiency. For example, in a room 20 feet wide with certain types of fixtures, illumination is about 20 percent higher with light walls than dark walls. High reflectivity in ceilings and walls increases actual foot-candles because light is reflected to the working plane. Dark ceilings absorb and waste light.

Lighting fixtures which are not cleaned regularly may cause a drop in illumination of as much as 50 percent within a short time. Under average conditions, a thorough cleaning every three months should be satisfactory. Dry wiping, however, is unsatisfactory, since it invariably leaves dirt, thereby reducing the efficiency of the lighting unit. When reflectors or glassware can be taken down, they should be scrubbed with a sponge or brush in a cleaning solution and rinsed in clean, warm water. The necessary frequency of cleaning lighting fixtures can be determined by periodic light-meter readings following the first cleaning. When foot-candles have dropped 15 percent, cleaning is needed.

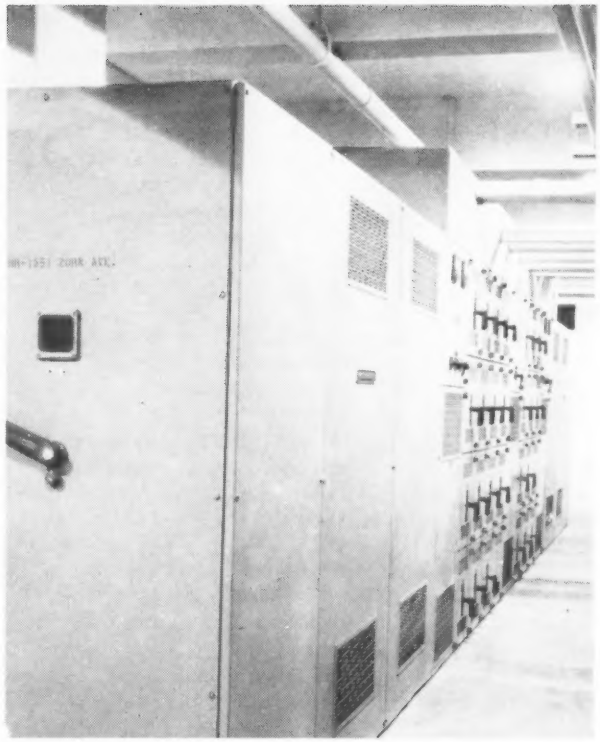
When replacing burned-out or blackened lamp bulbs, give careful attention to the size, type, wattage, and voltage approved for a particular location, since it is possible that unauthorized persons may have overloaded the circuits by using lamps of a larger size than intended for the wiring.

What lamp voltage should be used? Incandescent lamps are commonly available in ratings of 115, 120, and 125 volts. Lamps with a rating nearest to actual line voltage should be used. Line voltage higher than the rating shortens lamp life, but increases light output. Line voltage below the lamp rating extends life, but reduces light ouput three percent for each one percent drop in voltage. For example, if the circuit voltage is 115 volts and lamps are rated at 120 volts, there will be a 15 percent loss in lighting efficiency. The voltage of the various circuits, however, should be determined with a voltmeter, preferably of the recording type, prior to making any changes in the rated voltage of lamp bulbs.

How many engineers keep in touch with the local power company and are advised by its officials of changes in rates as approved by the rate-fixing commission? Many rate structures include a demand charge which is determined by the power company monthly on the basis of the maximum demand in kilowatts.

Determine at what time during the day the peak load occurs, by using a recording wattmeter or by observing the demand meter. If there are excessive peaks in the electrical load, consult with the hospital management to determine whether certain major power operations, such as electrical baking or the use of refrigeration motors and certain other heavy equipment, can be staggered. A total of 100 kilowatts removed from the peak load period might result in monthly savings of $150 per month. This assumes a maximum demand charge of $1.50 per kilowatt per month.

One most important matter which has been given a great deal of attention by all hospital engineers is the correction of fire and explosion hazards in operating rooms. The flame velocities of some anesthetics in wide use are among the highest encountered in combustible gases. It is a well-known fact that during many operations the gaseous mixture introduced into a patient's lungs has such physical properties that it might easily be used for



Above: View of the transformers and low voltage switch gear. Dual 13,800 volt, 3-phase primary services—two 750 KVA, 3-phase dry type transformers. Selective secondary 120/208 volts, 3-phase, 4-wire (wye connected) with manually operated secondary tie breaker in center of board.

the operation of an internal combustion engine. The anesthetic agents most frequently involved in explosions are ether, in any of the several compounds, ethylene, and cyclopropane.

With a view towards installation of proper equipment in hospital operating rooms, it is recommended that one review the NFPA Bulletin No. 56, "Safe Practices in Hospital Operating Rooms," and the NFPA Quarterly No. 48-2, "Advances in Operating Room Safety," by Carl W. Walter, M.D., as well as the NFPA bulletin entitled "Combustible Anesthetics in Hospital Operating Rooms," contained in Vol. 1 of the National Fire Codes. The requirements of the National Electrical Code for hazardous locations, as well as local codes pertaining to this matter, should also be carefully followed.

A study of approximately 300 case histories of anesthetic explosions, not all of which were fatal, revealed that causes may be classified as follows:

(a) Ignition by electrostatic discharge
(b) Ignition by spark or arc in the electrical system
(c) Ignition by flame or hot body, such as a cautery
(d) Ignition by spontaneous combustion
(e) Unsafe personal acts and practices, such as smoking.

We are primarily interested in the first two causes. Medical authorities believe that approximately one-fourth of the anesthetic explosions have been caused by electrostatic spark discharge. Statistics also indicate about the same frequency of occurrence from ignition by the electrical system as from ignition by electrostatic discharge. The engineer's definite responsibility, therefore, concerns primarily the physical details of the operating rooms and their electrical fittings.

In view of the above, it is strongly recommended that in inspections and planning for existing or future op-

(Continued on next page)

erating rooms the engineer become familiar with the necessary safety practices, giving full consideration to the following:

(a) Replacement of nonexplosion-proof lighting fixtures, switches, receptacles, thermostats, signal lights, and fittings in operating rooms with approved explosion-proof types, wherever required. All wiring and equipment, as previously stated, should be in accordance with the specifications of the National Electrical Code and the local codes. This pertains to portable equipment, as well as fixed equipment.
(Editor's note—Care must be taken to avoid replacement of worn conductive parts with those of ordinary variety. Extension cords fitted with ordinary plugs and receptacles should be banned from the operating room.)

(b) Attention should be given to proper ventilation. Air should be brought into the operating room by ducts opening not less than six feet from the floor and removed from the room by ducts opening within one foot from the floor.
(Editor's note—Electrostatic precipitators installed in the air conditioning ducts will control dust and eliminate danger of air-borne bacteria from recirculated air.)

(c) Temperature and humidity should be so controlled as to insure the well-being of patient and personnel. A 55 to 60 percent level for relative humidity is considered satisfactory.

(d) Flooring in the operating rooms should be of the conductive type as recommended by the NFPA. It may consist of conductive asphalt tile or conductive rubber tile. Terrazzo floors of light composition should have inlaid metal grills for grounding purposes.
(Editor's note—The resistance of conductive floors and equipment should be tested initially before use and at regular intervals. A permanent record of the readings should be kept.)

(e) Furniture in the operating room should be metallic or of other electrical conductive material, with surfaces free of paint or lacquer finishes. All rubber should consist of conductive material with conductive legs or conductive casters. Mattresses and pads should also consist of conductive rubber or the equivalent.

(f) The matter of grounding should be given careful consideration in the operating room to comply with all of the established codes previously mentioned. If there is any doubt as to the necessary changes required for operating rooms, it is suggested that the services of a competent engineer be employed, so that at all times the safest possible equipment will be in use.
(Editor's note—Inspectors should be alert to breaks in insulation. Whenever feasible, a visual and audible ground contact indicator should be installed to detect flaws in wiring or equipment.)

REFERENCES

1. National Board of Fire Underwriters, 85 John St., New York City, Pamphlet No. 70, "National Electrical Code."

2. Knowlton, Archer Eben, **Standard Handbook for Electrical Engineers.** New York: McGraw-Hill Book Co.

3. Craft, Terrell Williams, **American Electricians' Handbook.** New York: McGraw-Hill Book Co.

4. Kurtz, Edwin Bernard, **The Lineman's Handbook.** New York: McGraw-Hill Book Co.

5. National Safety Council, 425 N. Michigan Ave., "Manual for Industrial Operations."

6. National Fire Protection Association, 60 Batterymarch St., Boston 10, Bulletin No. 56, "Safe Practice for Hospital Operating Rooms."

7. National Fire Protection Association Quarterly No. 48-2, "Advances in Operating Room Safety."

8. National Fire Protection Association, Vol. I. National Fire Codes.

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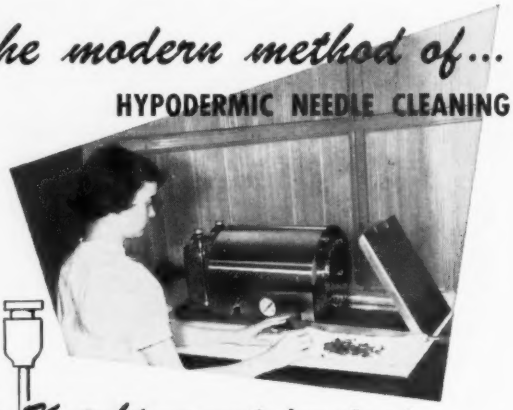

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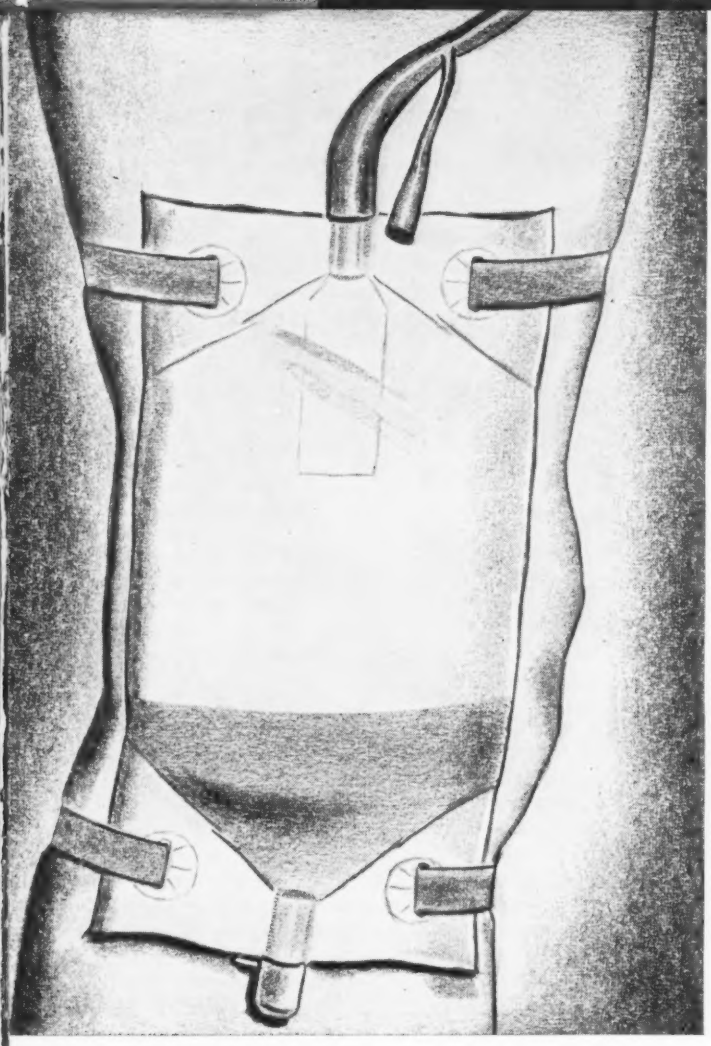

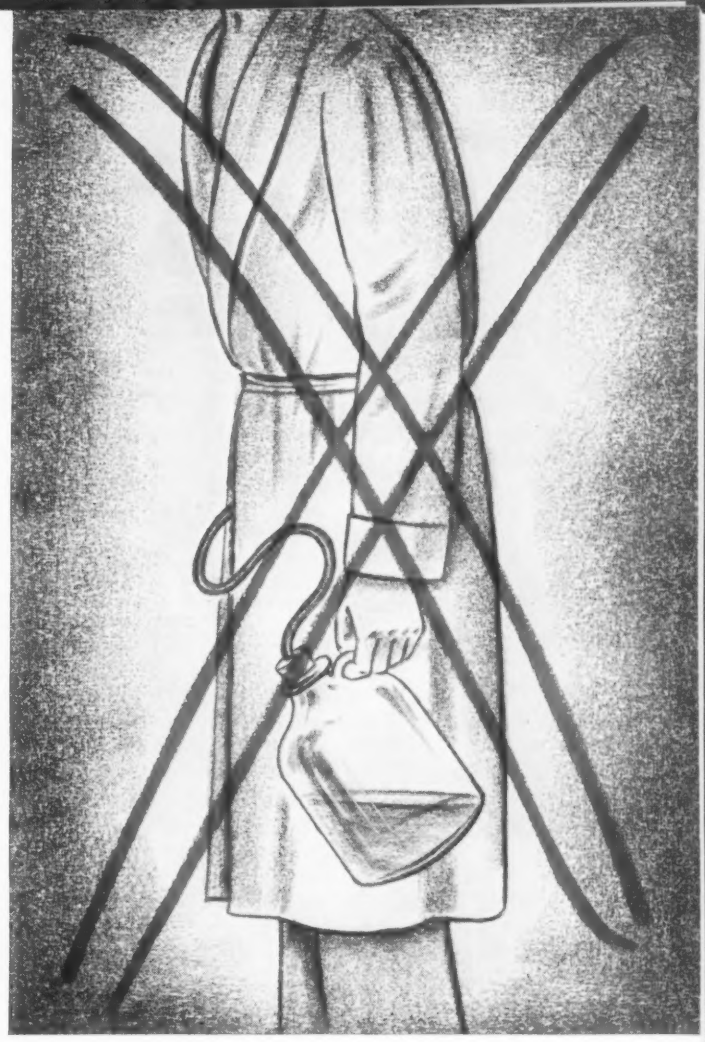

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Minimum Standards for Facilities Receiving Federal Funds*

By John W. Cronin, Medical Director
Chief, Division of Hospital Facilities
U.S. Public Health Service
Department of Health, Education and Welfare
Washington, D.C.

As the science of medicine has advanced, with its increasingly effective methods of combating disease, there has been and probably will continue to be a lengthening of life expectancy. It is estimated that there are now approximately 13 million persons in the country who are 65 years of age or more, that approximately 400,000 are being added to this group each year, and that 5.3 million people in the United States are afflicted with chronic disease.

Today the problems of chronic disease are being studied intensively on national and local fronts by both government and non-government groups and associations, and by many individuals working cooperatively or independently. We must provide the type of medical care facility which is appropriate for the care of patients with a chronic disease, just as we have so effectively provided facilities for the acutely ill.

The President, in his special Health Message to the Congress on January 18, 1954, recommended broadening the Hospital Survey and Construction Program to emphasize the need for the care of the long-term patient—among other needs. Subsequently, Congress enacted Public Law 482, which broadened the base of the Hospital Survey and Construction Act to include federal assistance in the cost of construction and equipment of nursing homes, rehabilitation facilities, diagnostic and treatment centers, and chronic disease hospitals.

The act required that the Surgeon General establish regulations and minimum standards of construction and equipment for these facilities within a six-month period following the passage of the Act. On January 12, 1955, the regulations became effective. They consist of the regulations which set the pattern of operation of the program, Appendix A, which outlines the minimum standards of construction and equipment, and Appendix B, which relates to the merit system policies of the Public Health Law.

A great deal of study went into the development of these regulations and appendices. During the several months preceding their publication, tentative drafts were submitted for review to such groups as the American Medical Association, the American Hospital Association, the American Public Health Association, national nursing home associations, rehabilitation organizations, state agencies administering the Hill-Burton program, and other interested and related groups.

The Federal Hospital Council (which by law is required to approve all the regulations before they can be issued) met on two separate occasions to review, study, revise, and finally approve them. The Federal Hospital Council was assisted by a subcommittee consisting of technically expert persons in the several fields of the expanded Hospital Survey and Construction Program to bring Appendix A, Standards of Construction and Equipment, in line with current trends, philosophy, and practices. Among these persons were E. M. Bluestone, M.D., H. W. Kendall, M.D., Dean Roberts, M.D., Douglas Orr, Clifford Wolfe, Henry H. Kessler, M.D., William K. Page, Ray E. Trussell, M.D., Wilbur H. Tusler, and Edna Nicholson.

The time and effort devoted to the development of the regulations by many persons within and outside the Public Health Service represent many thousand hours of hard work in expression of ideas, discussion, and compromise in order to produce an effective, acceptable instrument of administration and guide.

Flexibility for planning and construction was maintained, because it has worked well under the Program since 1946. But, while providing flexibility, the regulations set a base for quality construction and equipment. Beyond this, items are included which may be required by the type of service programmed, and are clearly marked "as required by the Program." When provided they must meet the basic minimums required by the regulations. Many other items are marked "desirable but not mandatory." These items may easily become tomorrow's minimum if practice and acceptance so indicates. It is hoped that through the inclusion of such markings as "desirable but not mandatory" the initiative in program planning development and construction will not be frustrated and stultified.

The authority for minimum standards is established by the basic acts: Public Law 725, 79th Congress, as amended, the Hospital Survey and Construction Act, provides compliance with minimum state standards of maintenance and operation, as well as minimum standards for construction and equipment. Public Law 482, 84th Congress, the Medical Facilities Survey and Construction Act of 1954, pro-

*Presented at the Section on Institutional Care of the Chronically Ill, Tri-State Hospital Assembly, Chicago, Illinois, Tuesday, May 3, 1955.

vides also for compliance with minimum standards for construction and equipment, but for standards of maintenance and operation only insofar as the respective states establish such standards, if any.

Thus states are required to establish minimum standards for maintenance and operation for the types of projects aided under the original act, but facilities such as nursing homes, diagnostic and treatment centers, and rehabilitation facilities assisted under the amended act need only comply with such minimum standards, if any, as the State may require.

However, this latter act does imply a number of minimum standards of operation. What are some of these in connection with the chronic disease hospital and nursing home?

CHRONIC DISEASE HOSPITAL

The regulations define a chronic disease hospital as a hospital for the treatment of chronic illness including the degenerative diseases and in which treatment and care is administered by or under the direction of persons licensed to practice medicine or surgery in the state. The implications of this latter phrase are obvious.

Not so many years ago many chronic diseases were frequently labeled "incurable." This deplorable situation is rapidly changing for the better through quality medical care and the ever-increasing emphasis on rehabilitation programs. Prevention and rehabilitation have had a marked influence on creating this change, but many inadequate and inappropriate facilities are still being used.

Care of the chronically ill, as well as that of the acutely ill, is a medical problem, and the services of the physician are essential. The chronically ill patient may be acutely ill today and yet be up and around tomorrow. He needs a variety of medical skills and related services, and to assure this the regulations specify that his care must be under professional supervision and guidance of persons licensed to practice medicine or surgery.

The regulations further establish that in determining priority of projects for federal financial assistance special consideration shall be given to projects in which the chronic disease facility will be operated as a subunit of a general hospital. The advantages of such an arrangement may be listed as follows:

1. Provides joint medical supervision
2. Encourages the development of interest in chronic disease
3. Emphasizes the opportunity for teaching and training in the problems of long-term care patients
4. Encourages research in chronic illness
5. All the clinical facilities for acute and chronic illness care are readily available without duplication of these facilities.

Some other minimum construction and equipment standards include adjunct diagnostic and treatment facilities, such as laboratory, radiological, and pharmaceutical services. The importance of physical therapy and occupational therapy is emphasized, but much is left to the discretion of the sponsor.

- The nursing service units must have more square feet for rooms which the patients use in common—such as dining rooms and solaria—than are needed for general hospitals.
- The minimum areas for patients' rooms are the same as those for the acutely ill in the general hospitals. We feel very strongly that 80 square feet per bed is minimal and believe that sponsors of projects will prefer a greater area.
- We recommend no more than two beds per patient room, but there may be as many as six beds in each in hospitals having a total of more than 100 beds.
- The maximum size of a nursing unit is set at 40 beds.
- No patient's room may be located below grade.
- We hope there will be appropriately located toilets. I don't have to point out how much this will mean to both patient and nurse.
- Finally, for the nursing department, the usual service facilities are mandatory.
- A minimum surgical department is itemized if the program of the individual hospital calls for such a department.
- A dental department with minimum facilities for diagnosis and treatment as well as laboratory procedures is required.
- Service facilities, such as kitchen, boiler room, etc., are required, as in a general hospital.

THE NURSING HOME

The nursing home is not a substitute for a hospital, for the patient's home, or for anything. It is properly a medical care facility and an essential entity in the constellation of medical care facilities. We must design and plan the nursing home to meet the needs of its patients just as carefully as we plan the hospital to meet the needs of its patients. To do this we must have clear-cut definitions and specific programs relating to the mission of the nursing home.

A nursing home is defined in the amended act as a facility for the accommodation of convalescents and other persons who are not acutely ill and not in need of hospital care, but who require skilled nursing care and related medical services. From this definition, it is clear that the program would not encompass old-age homes or any other institution furnishing domiciliary care without the essential elements of skilled nursing care of medical services.

The primary purpose of domiciliary institutions is to furnish food, shelter, and other nonmedical services. They will not be classified as skilled nursing homes in the state plan, although there might be available in such institutions, temporarily and incidentally, the same type of limited medical attention as the individual would normally receive if he were living in a private home.

Similarly, those facilities which provide personal services only will not be classified as skilled nursing homes in the state plan. Personal services include help in walking, getting in and out of bed, assistance with bathing, help with dressing and feeding, preparation of special diet, supervision over medication which can be self-administered, and other such items of personal assistance.

Skilled nursing care is defined for the purposes of this program as nursing services and procedures employed in caring for the sick which require technical knowledge and skill beyond that which the untrained person possesses. Skilled nursing care is normally provided by professional registered nurses or trained practical nurses. A facility which does not employ registered or trained practical nurses is not to be classified as a nursing home rendering skilled nursing care.

A nursing home constructed under this program may be operated in connection with a hospital or as a separate facility in which nursing care and medical services are prescribed by or performed under the general direction of persons licensed to practice medicine or surgery in the state. If the nursing home is affiliated with a hospital, the medical staff may provide medical services for the patients in the nursing home. A nursing home separate from a hospital may, of course, have its own staff of physicians, or

(Continued on next page)

each resident may designate a physician who will be responsible for the supervision of his medical care.

24-HOUR CARE ESSENTIAL

Federal aid for building nursing homes is restricted to those facilities whose purpose is to provide nursing care and related medical services for not less than 24 hours a day for individuals admitted because of illness, disease, or physical or mental infirmity, and which provide community service. Facilities at such institutions as prisons, industrial schools and orphanages, or nursing homes which restrict admission to certain denominations or groups are not considered to be rendering a community service.

The regulations governing the program define a nonprofit nursing home as one owned and operated by one or more nonprofit incorporations or associations, no part of the net earnings of which may lawfully inure, to the benefit of any private shareholder or individual. Exemptions from taxation under the Internal Revenue Code may be used to establish nonprofit status.

Activities essential to the care of patients in the skilled nursing home include;

1. Interpreting the patient's needs as they relate to his clinical disease or condition and general welfare, physically, mentally or psychologically, and to him as an individual
2. Observing, recording, and reporting to the physician, the physical, emotional, and mental symptoms which may have significance for continued diagnosis, medical direction, treatment, etc.
3. Giving medications and carrying out treatments as prescribed by the physician
4. Observing the patient to detect symptoms which may suggest the onset of reactions following treatments and acquiring measures to combat reactions, should they occur
5. Anticipating situations and meeting emergencies with promptness and good judgment which relate to the maintenance of the patient's health
6. Assisting the patient with activities for daily living which are necessary for his well-being and comfort which he cannot do or should not do for himself; planning services to provide for patient care plans for each patient, according to medical direction based on the patient limitations, and requirements for meeting his respective needs, physically, emotionally, etc. Activities inherent in nursing care plans, for the needs of patients in skilled nursing homes, include direct care, assistance, rehabilitation education, and training in services that lead to "self help" or independence, or enable him to return to his family and occupation. Such services embrace specific activities, like assisting the patient to walk, get in and out of bed, eat, and do therapeutic exercise.

AVOID INSTITUTIONAL ATMOSPHERE

In reference to minimum standards for construction and equipment for nursing homes, we visualize a minimum facility which will provide a noninstitutional atmosphere. Homelike surroundings should be approximated as closely as possible. Larger bedrooms, with more wardrobe and closet space, are desirable for the long-stay patient. The use of more open planning, provision of inviting recreational spaces, both indoors and out, use of decoration, color, furnishings, etc., to minimize the institutional look are recommended.

- Recreational, occupational activity, and dining rooms may be combined for a total area of 50 square feet for 75 percent of the beds. This is the current estimated percentage of ambulant and semi-ambulant patients—a figure which should be increased under a truly dynamic treatment program.
- Physical therapy services are to be provided as required by the individual program.
- A patient's laundry where personal clothing can be taken care of is recommended.
- An outside recreation area is to be provided if required by the program.
- Again, we would like to see larger bedrooms provided and hope their size can be increased shortly. No more than two beds per patient room is recommended, but as many as six per room is acceptable for a 100-bed nursing home.
- One isolation room with toilet for each sex is mandatory for each nursing unit.
- The maximum size for a nursing unit is 40 beds.
- Service facilities for the nursing department are the same as in a general hospital and include nurses' station, utility room, and treatment room. Training toilet facilities are also included. The service department for the nursing home requires a kitchen in keeping with the size of the facility, housekeeping facilities, a laundry if a commercial laundry is not available, and the usual boiler room, lockers, and storage room.

FEW FOOTAGE LIMITATIONS

Except in a very few instances—such as patients' rooms, dining and recreation areas, and storage areas—we have made no square foot limitation. This is another indication of our desire to assure as complete freedom of planning as possible.

These are the minimum standards set in the federal regulations. They comprise the level below which construction will not be approved. Whether they will give patients the kinds of services they need is largely up to the people who are interested in building these facilities. If a potential sponsor of such a project will first determine just what kinds of services he wants to provide; next, decide exactly the type of building he needs and the equipment he must put in it; and, finally, explain all his requirements, in detail, to his architect, the result will undoubtedly fulfill his specifications. Such a program is absolutely imperative if we are to build efficiently and provide the services needed for chronic disease patients.

Some persons believe that many chronic disease patients do not require hospitalization and medical care. But they do require medical supervision, and they must be lodged where access to hospitalization is easy and quick, for the presence of one chronic disease—particularly in elderly people—quite often is followed by another chronic disease, or by an acute illness. The debilitating effects of chronic illness can make a major illness of what would be a minor one in a healthy person. It is not always a simple matter for a nursing home to make satisfactory arrangements with a hospital to take care of crises as they arise.

Therefore, we must plan jointly. We must plan for the *prevention* of chronic disease, for only when we put our increasing store of knowledge to work on the preventive aspects of long-term illness will we relieve ourselves of our overwhelming burdens. We must plan for the *rehabilitation* of the patient at all levels of medical care.

Above all, we must provide the opportunity for our patients to be happy. I feel strongly that to be happy one must feel that he is wanted and that he is making a contribution. An adequate program for the care of the chronically ill must promote happiness for the patient. Many can acquire rehabilitation to currently unforeseen heights.

The EEG Laboratory in the Small Hospital

By Roger B. Rowand

• The small hospital fortunate enough to be equipped with an electroencephalography laboratory is often faced with a many-sided personnel problem.

Is the salary of the technician in the laboratory justified when the department is not earning enough to cover his weekly pay check? How should a new technician be trained? How can the greatest clerical efficiency be achieved for the department? The answers to these questions spell the success or failure of the laboratory.

One small, general hospital solved the complex problem in a way that has proved satisfactory to all concerned.

A technician was employed on an "on call" basis, with his salary geared to the number of patients examined. A standard charge for an EEG at this hospital was $25. Of this, the technician received $15. Salary was therefore in direct proportion to the hospital's income for the use of the equipment and space. This arrangement was acceptable to the hospital administrative staff and the technician.

A public relations advantage was discovered shortly after making the change. When the technician's pay was hinged so obviously to work done, his efficiency increased. With the functioning of a more businesslike department came a more businesslike relationship between referring physicians and institutions. Appointments were made at hours convenient to the patients. Reports of EEG's were returned more promptly than they had been in the past.

Better service and increased activity for the department resulted. The technician's interest in his job increased as he realized his important part in the overall scheme.

Appointments for electroencephalographs are made through the office of the assistant superintendent, whose secretary has been briefed on the functions of the laboratory.

The task of selecting and training a new technician in the small hospital brings its own problems. The use of the ever-present, large, diversified, part-time labor market is the best, most obvious source. Even in a small community there are many persons able and willing to work only a few hours a day. From this group, a man or woman with the general qualifications of a technician may be found. The staff neurologist or neurosurgeon should have the final word on selection, because administrative personnel are often unaware of detailed requirements.

A secondary school education is virtually essential. A moderate degree of manual dexterity is valuable, as is some knowledge of the basic principles of typing and record maintenance. A rudimentary grasp of anatomy and physiology is desirable, but not mandatory. Terminology and knowledge of position and function of parts of the human body will be acquired in training.

Above all, the prospective technician must be able to deal with people who are ill. He will be called upon to make electroencephalographic tracings on a wide variety of personality types. The first patient in a day may be a psychotic, the next a highly excitable neurotic, and the next an epileptic child with anxious, curious parents. The technician must be able to control the patient and to allay his fears and misapprehensions.

The ideal technician would be an electronics technician, possessing as well a thorough knowledge of the workings of the human body and psyche, but such personnel are not available to the small institution.

In the small hospital requiring only a part-time employee in the EEG department, the training of a technician may be difficult. There are seldom enough cases during a reasonably lengthy training period to permit a sufficient amount of practical, on-the-job training. Theoretical instruction can furnish background, but work with the EEG machinery is essential.

The problem can be solved by sending the trainee to other institutions at times when EEG's have been scheduled. Cooperation of the technical staffs of nearby laboratories will be obtained easily. The prospective technician should be on a regular salary during the training phase.

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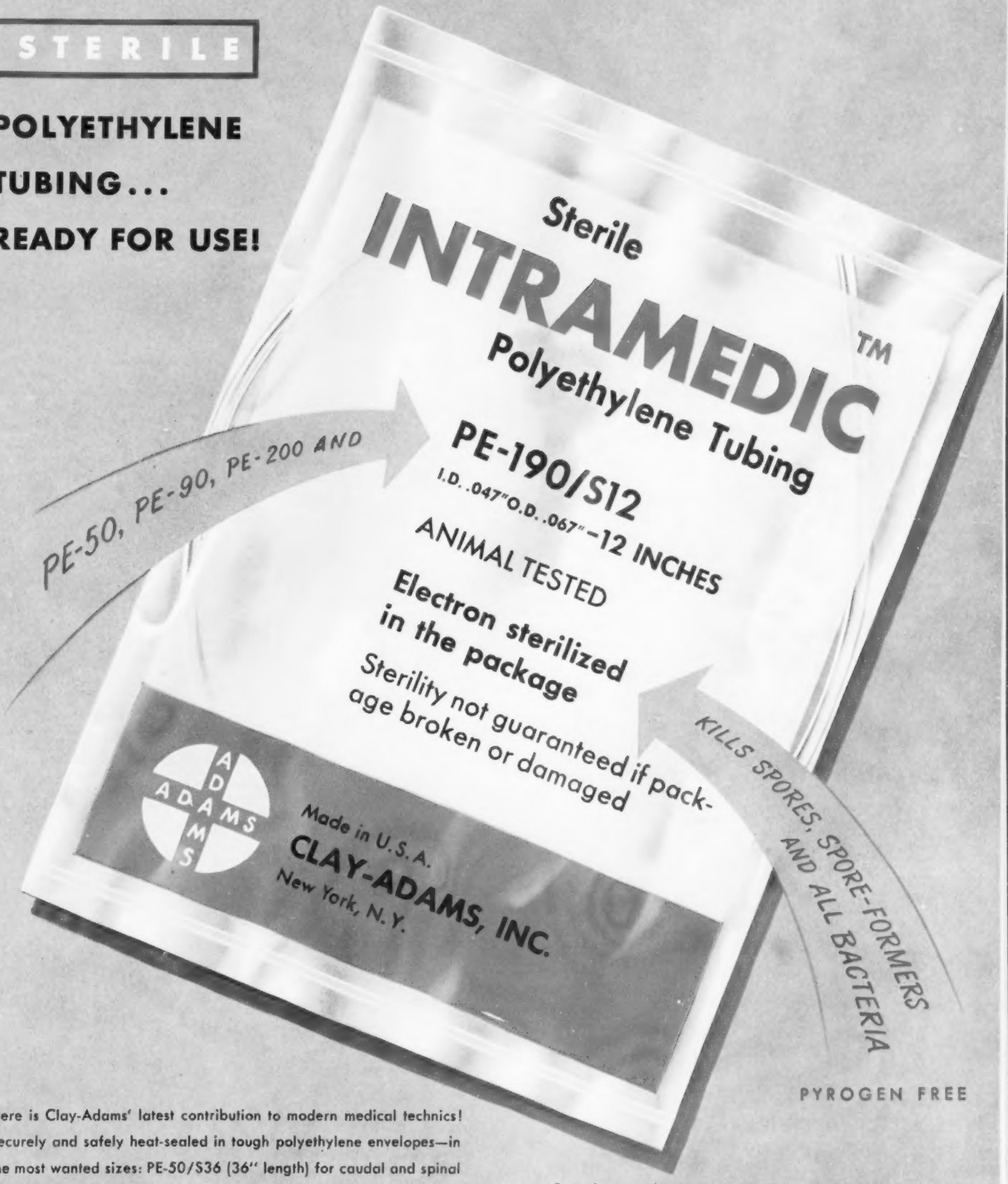

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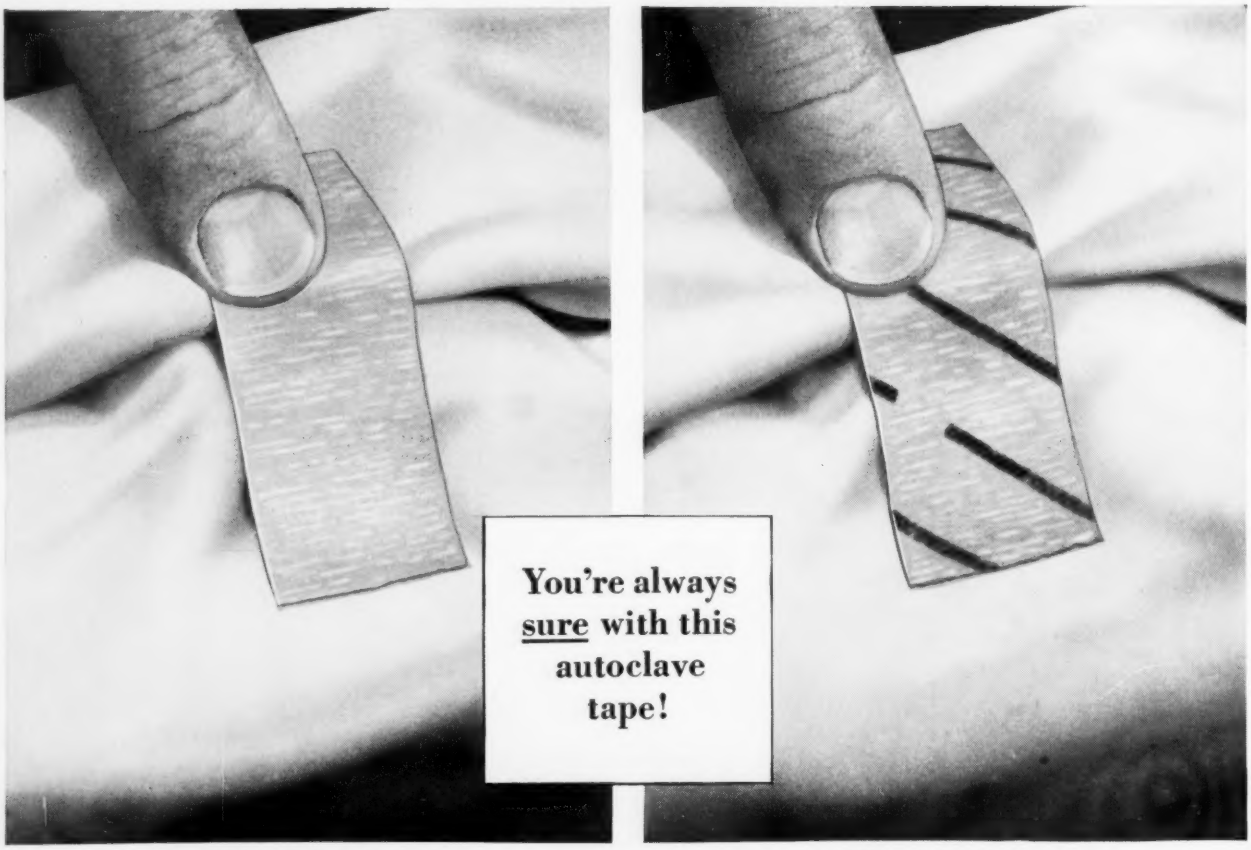

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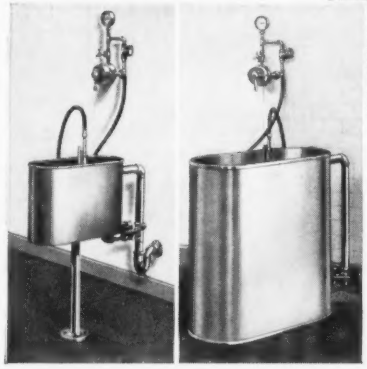

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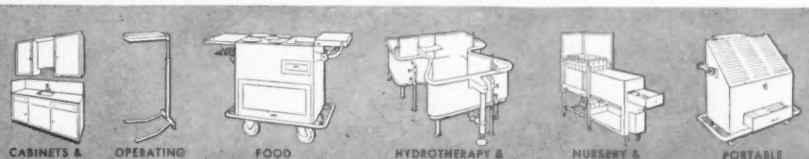

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Newly elected officers of the Maine Hospital Association are (l. to r.): Matthew I. Barron, secretary; Sister Mary Mercy, treasurer; Neil H. Bunker, president; and Lawrence M. MacDougall, president-elect.

Maine Meeting Attracts Key Personnel

About 175 administrators, trustees, and other hospital personnel attended the annual meeting of the Maine Hospital Association on June 7 and 8 at the Samoset Hotel, Rockland, Me.

Officers elected for the coming year are: Neil H. Bunker, administrator, Mt. Desert Island Hospital, Bar Harbor, president; Lawrence H. MacDougall, Bangor, president-elect; Matthew I. Barron, superintendent, Portland City Hospital, secretary; and Sister Mary Mercy, Mercy Hospital, Portland, treasurer.

Because the many legal aspects of patient care create problems for most hospitals, the first general session of the two-day meeting was devoted to discussion of the "Welfare Patient and the Voluntary Hospital." Members of the panel included a municipal corporation counsel, a city director of public welfare, a representative of the State Department of Health and Welfare, and the social service director of a voluntary hospital.

A session on hospital admissions and financial arrangements brought out conflicting attitudes as to where the emphasis should be placed when a patient first enters the hospital. According to one director of admissions, only the emotional and spiritual requirements of the patient should be met in the admitting office, leaving the "more unpleasant" task of financial arrangements to the credit or business office. Another admitting officer indicated the need for business-like procedures at the beginning of a patient's stay and illustrated how the admitting office can meet the patient's emotional problems and make the necessary financial arrangements to the satisfaction of both the patient and the hospital.

Other sessions during the meeting were concerned with "The Value of Workshops" as educational experiences and in-training programs and the preparation of budgets for small hospitals.

The following resolutions were passed at the final business session: to reaffirm support of the State Department of Civilian Defense in providing adequate hospital disaster facilities; to make an effort to expand membership to the trustee and staff groups of hospitals; and to support the position of the State Department of Health, the National Foundation for Infantile Paralysis, and the U.S. Public Health Service in allowing qualified professional people to evaluate the Salk vaccine in an effort to reduce or eliminate political intervention on the national level.

Meeting concurrently with the MHA, the Maine Association of Hospital Auxiliaries heard Herbert T. Wagner, M.D., Director of Hospital Services for the NFIP, discuss the "Polio Vaccine Program." Verne Kallejian, Director of Education for the AHA, pointed out the principles of "Organization and Leadership of Auxiliaries," and Mrs. Frederick N. Blodgett, member of the AHA Committee on Hospital Auxiliaries, emphasized the public relations responsibilities of hospital auxiliaries.

Governor of Maine Edmund S. Muskie and his wife attended the association's annual banquet. Shown (l. to r.) are: Dana S. Thompson, retiring president of the MHA and executive director, Central Maine General Hospital, Lewiston; Governor Muskie; Mrs. Muskie; Mrs. Edward J. Conquest, president, Maine Association of Hospital Auxiliaries; and Neil H. Bunker.

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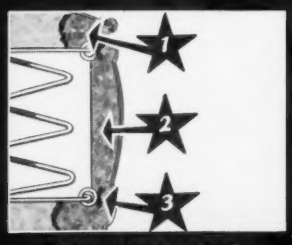

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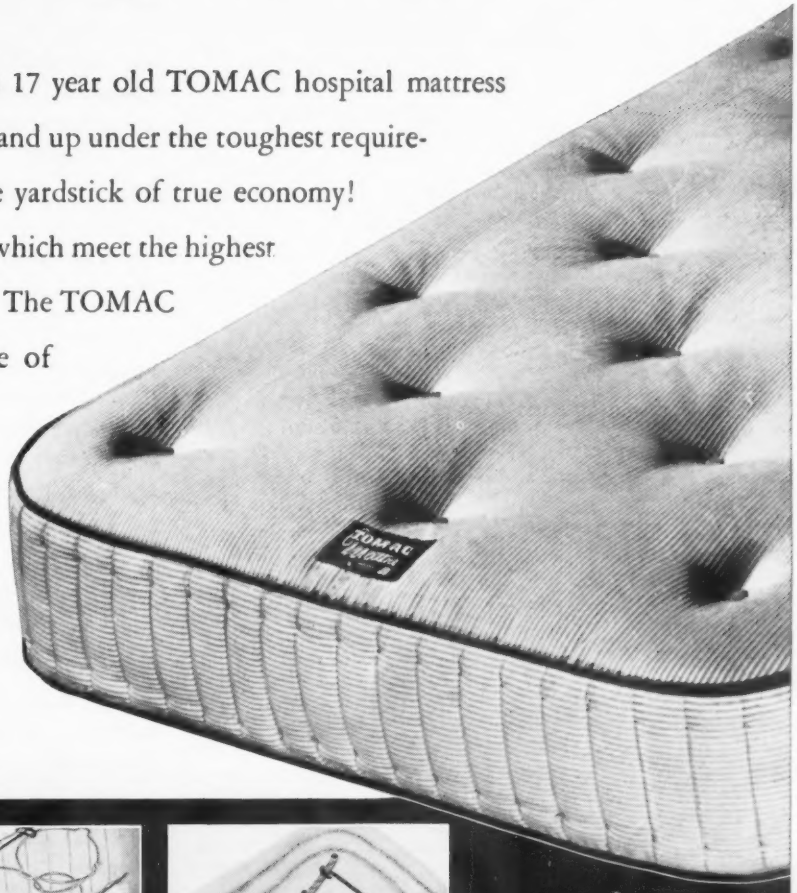

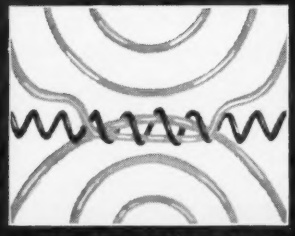

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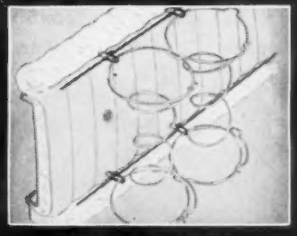

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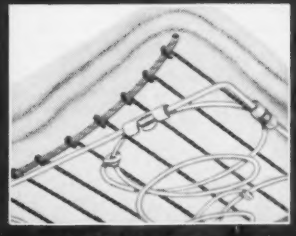

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Pediatric Nursing

Nursing Care of Children with Rheumatic Fever

By Mildred Fleming, B.S., R.N.
Director of Nursing Service
La Rabida Jackson Park Sanitarium
Chicago, Illinois

● The recovery of rheumatic fever patients depends on long periods of bed rest. The nursing care of such patients, therefore, is extremely important and necessitates close supervision of the patients.

La Rabida Jackson Park Sanitarium is one of the few institutions in the country which specializes in the treatment of children with rheumatic fever. In 1949 La Rabida was converted from a convalescent sanitarium for rheumatic fever cases to an acute hospital. The 82-bed institution accepts children with the disease up to the age of 16. Plans now are being made to increase the bed capacity to 92, and the age limit to 18 years.

Children are referred to the hospital by their family physicians, hospital clinics, or other recognized agencies, and are hospitalized during the active phase of the disease and throughout a stabilization period.

The average stay at the hospital is two months— if there is no heart disease. Children with heart disease may be hospitalized for from three to six months.

Because rheumatic fever is a long-term illness with a possibility of recurrent attacks, there are two over-all objectives in nursing care: (1) The child must be helped to get well as quickly and as completely as possible, and (2) he must be helped to understand what he should do in order to keep well after he has left the hospital.

During the period of active disease, bed rest is essential to treatment. It is important that the nurse understand how much limitation is necessary for the individual child. The child who has heart failure must be strictly limited in his activity. He should be supported with a back rest, helped with meals, and turned by the nurse. The child who has moderate or no heart disease should be allowed to sit up in bed and do school work and bedside occupational therapy. These activities are satisfying outlets for the normal energy of growing children.

Another important part of nursing care of rheumatic fever victims is the prevention of beta hemolytic streptococcal infection. It is known that rheumatic fever is related to this type of infection, although research has not yet explained the nature of this relationship. Consequently, every effort is made to guard the patients against additional infection during hospitalization. The nurses carry on a program of health education, teaching the children the importance of oral hygiene and how to care for themselves when they have colds or sore throats. As part of this program, all patients and personnel have throat cultures made once a week. Visitors wear masks to guard the children against outside infection.

The health habits developed in the hospital can readily be carried over to the home and thus help prevent recurrences of the disease.

(Continued on next page)

Above: Miss Fleming stops to admire the art work of Sharon Higgins. The children's names, spelled out in block letters, are thumbtacked to bulletin boards behind their beds. The patients are moved often so that they will be congenial companions. The block system makes identification easy.

During treatment the nurses observe the children for symptoms of active disease, such as joint pains, appearance of the typical rash of erythema, or choreiform movements.

Nurses must also observe the patients responses to therapy and must be able to recognize undesirable side effects of the drugs.

Helping the child to get well involves more than taking temperatures and performing technical procedures. First the nurse must know him, understand him, and respect him as an individual. Then she must gain his cooperation through sincere interest in his welfare. Helping him to understand his illness and the reasons for his limitations are steps toward gaining his cooperation in treatment.

The emotional care of the children is not the nurse's responsibility alone. In this phase of care she cooperates with the social worker, the doctor and the occupational therapist. The children often do not understand their illness. They fear that they will never be able to return to normal living at school or at home. Very often they worry about their symptoms and progress. It requires combined effort on the part of the professional staff to reassure them emotionally.

The social workers speak with the children about their fears and anxieties. The medical director has regular conferences with the parents to explain the nature and course of rheumatic fever. These conferences help the parents to understand the needs of the patient in the hospital, later at home and eventually when the patient returns to normal life. The occupational therapist's role is to provide satis-

Left: The social worker talks to all the children about any special problems or worries they might have. This little girl has just finished talking to her mother on a portable telephone.

Below: Children on their way to recovery are allowed to wear street clothes a few hours each day. In the play room, a volunteer worker keeps this group of youngsters engrossed in a new game.

fying outlets for the children's pent-up energy. The program is directed towards return to normal activity.

The rehabilitation to physical activity must be closely supervised. As each new activity and privilege is added to their regime, the patients' tolerance must be observed by the nurse. As their tolerance increases, the children are allowed more varied occupational therapy, including indoor and outdoor activities.

When the child is ready to leave the hospital, a public health nurse on the staff of La Rabida acts as a liaison between the hospital and the community. She confers with the school nurse or goes directly to the school to talk to the classroom teacher. The public health nurse also plays an active part in the hospital's follow-up program.

After discharge, the children return for checkups once a month at first, then every three months, then every six months, and finally once a year. At each visit the public health nurse carries on the health teaching program, explains the doctor's directions and with the social worker checks on the child's adjustment to his family and school.

The care of the child with rheumatic fever requires cooperative effort and planning among the doctor, the nurse, the social worker, the occupational therapist, the public health nurse, and the school in order to achieve the maximum rehabilitation to normal childhood activities, continuity of care, and prevention of recurrent attacks.

(Continued on next page)

Right: Occupational therapist makes the rounds with her gaily decorated cart overflowing with ideas to keep the children happy and busy.

Below: Mary Cima, laboratory technician, comes by to do a weekly throat culture on Jimmy McGehee.

Below: Shirley Stewart, one of the more acutely ill children, found it difficult to breathe when she was lying down. Nurses placed her pillow on her bedside table so that she might get some rest while sitting up.

La Rabida Graded Activity Program

BEDREST-BR

Group E

Heart failure, active rheumatic fever
No weight bearing activities
Bed rest when sitting up—required
Bed pan and bed baths as tolerated
Should be turned by nurse
Helped in eating
Should wear same clothes for day and night

Group D

Semi-weight bearing activities
Back rest when sitting up—optional
To bathroom for B.M.'s
(wheelchair for big children—must be assisted—others carried. To be supervised)
May be moved to another bed if carried
May feed himself
Should wear same clothes for day and night

BATHROOM AND TABLE-BRT—Stabilization period, return to physical activity

Weight-bearing activities increased
B.M. in bathroom
Tub bath
Two meals at table

1 Hour

Two meals at table
Bathroom privileges
Walking gait
No stair climbing—must use elevator
O.T. workshop—2:30-3:30
Movies Wednesday night
May wear street clothes for hours of activity

2 Hours

Two meals at table
Bathroom privileges
Walking gait
May walk down stairs
O.T. workshop—2:30-3:30 (includes porch or lawn activities—weather permitting)
Evening activities—6:30-8:00
(exception—Friday morning music program instead of evening activity)

3 Hours

Two meals at table
Bathroom privileges
Walking gait
May walk up and down stairs
Afternoon walk—2:30-3:00
O.T. workshop—3:00-4:30
Evening activities—6:30-8:00
(exception—Friday morning Music Program instead of evening activity)
Boating and fishing in summer

4 Hours

Same as 3 hours, plus:
One meal in dining room daily—5:00-6:00
Picnics and cookouts in the summer
More responsibility—may assist nurses
Extra school work when indicated

FULL ACTIVITY—means return to home

DAILY SCHEDULE

6:30- 7:00 Wake up—morning care
7:00- 9:00 Breakfast, baths, medications
9:00-12:00 School
12:00-12:30 Dinner
12:30- 2:00 Rest period
2:30- 4:30 Bedside arts and crafts
5:00- 6:00 Supper
6:30- 8:00 Evening activities
2nd floor to sleep—8:00-8:30
1st floor to sleep—9:00-9:30

VISITING HOURS

3:30-4:30 p.m.
7:30-8:00 p.m.

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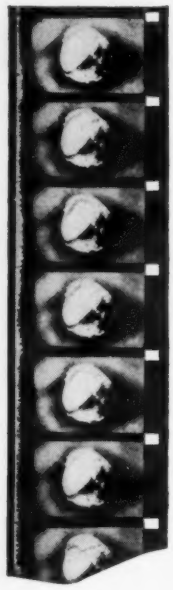

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Heyworth N. Sanford, M.D.

OB DEPARTMENT

Inhalation Therapy Problems in the Premature and Newborn Nursery

By Heyworth N. Sanford, M.D.
Professor and Head, Department of Pediatrics
University of Illinois College of Medicine
Chicago, Illinois

Our first problem in inhalation therapy comes with the birth of the child. When a baby is born that is not breathing or in whom breathing is inadequate, immediate action is necessary if his life is to be saved or if he is to be spared damage to his brain from anoxia. Only a few minutes of inadequate oxygen supply to the brain are needed to cause very serious injury.

Wyman Cole, M.D.,[1] Detroit, expresses this very nicely by the statement "An apneic baby can be compared to an intoxicated man who has been struck by an automobile and knocked to the pavement. He is in a certain amount of shock, he may have a cerebral injury, he is partially anesthetized and may well have aspirated vomitus or mucus. The most inexperienced person knows that this man must be moved as little as possible, that he must be kept warm, and that his mouth must be kept open and his throat cleared so that he can breathe, before anything else is done. The same principles must be followed with a baby."

This means that we have three cardinal principles in resuscitating the newborn infant: First, minimize shock; second, provide an open airway; and third, provide oxygen for the lungs. We can dismiss the first two quickly, although they are perhaps the most important, and get to the final topic. Shock may be minimized by gentleness in handling, avoiding violent means of stimulation, and keeping the baby warm. An open airway is provided by simple aspiration of the mouth and pharynx of blood and mucus, combined with postural drainage.

I wish to emphasize this need for oxygen in many full-term and premature infants at birth, especially those depressed by anesthetics or long labor. The normal term infant exists in the uterus at a blood oxygen saturation level of 50 percent. If untraumatized and not depressed by drugs that have entered the circulation through the placenta, he will, within 15 to 30 minutes after delivery have made adjustments that will have raised this to 90 or 95 percent saturation of the blood. To put this in a better way, in a group of infants studied by Taylor[2] when regional anesthesia was used, 45 percent of the infants had achieved 90 percent oxygen saturation by one hour of life, while three hours were necessary to attain this saturation when a general anesthetic such as ether was used for the delivery.

THE PREMATURE

In the premature infant we have a much more serious condition. Here the immature infant has a much-reduced ability to oxygenate its blood because of the immature cerebral respiratory center and poor muscular control of the thorax and diaphragm. There is a striking immaturity of the capillaries of the premature infant as compared to the full-term infant. This results in 100 percent of all premature infants under 1,500 grams reaching less than 85 percent oxygen saturation at one hour, and only 38 percent of those under 2,500 grams can reach this saturation. This suggests that the degree of blood oxygen saturation is directly proportional to birth weight.

While in both groups the arterial oxygen capacity is 20.8 volumes percent at birth, this content in the normal infant may be as little as 10.5 volumes percent, and in the asphyxiated as little as 1.0 volume percent. However, the carbon dioxide tension in the normal infant is 32 mm. of mercury, while in the asphyxiated infant it has increased to 65 mm. of mercury—thus very well indicating that what the asphyxiated newborn needs is oxygen, not carbon dioxide.

In larger prematures, or full-term infants who are making respiratory efforts, most of the time all that is necessary is to administer oxygen by either face mask or an appropriate incubator. In a short time many of these infants will gradually expand their lungs sufficiently to carry on respiration. The need for further oxygenation will therefore depend on the individual infant. The majority will be sufficiently expanded so that they can dispense with this extra oxygen. However, smaller infants and

(Continued on next page)

those suffering from shock, injury, or narcosis, will need some further aid in obtaining enough oxygen.

Numerous types of mechanical respirators have been devised for this purpose. In general, their basic principle depends on some method of providing oxygen under positive pressure. This may be combined with negative pressure on the thoracic cage, or by positive pressure only. Negative pressure is usually accomplished by either actual decompression of the apparatus which surrounds the thorax, by rocking the infant to cause alternate raising and lowering of the diaphragm, or by electrophrenic stimulation. None of these methods has proven successful with the premature infant, and only partially so with the full-term infant. The continued high mortality rate is evidence of this failure.

The rocking bassinet offers some possibilities, as we have physiological and clinical proof that it is of value in postpoliomyelitis paralysis, but I must admit that we have had no great success with it in the newborn. This also applies to electrophrenic stimulation[3]; while it was successful in some instances of atelectasis, in the majority of infants, tiring of the phrenic nerve as a result of intermittent stimulation was the unfortunate result in most instances.

One great objection to these methods is that it is difficult to adjust any machine to coincide with the respiratory attempts of the infant. If the movements of the apparatus do not coincide with the breathing of the baby, they may actually interfere with it.

USE OF AIR-LOCK

Perhaps a move in the right direction is in the Air-Lock devised by Bloxsom[4] on the theory that rhythmically applied alternating compression and decompression, such as occurs during birth through the birth canal, is essential to "condition" the infant for respiratory function after birth. The asphyxiated infant is immediately placed naked in the warmed, humified chamber containing an atmosphere maintained at 60 percent oxygen concentration, and the chamber is locked. The pressure within the chamber is then raised to three pounds per square inch, at which point an automatic trip mechanism allows the pressure to fall to one pound, from which it is again raised automatically to three pounds. This cycle of alternating increased and decreased pressure is kept at two pounds until all evidence of residual cyanosis in the hands and feet has disappeared.

Some of the benefits claimed for this method of treatment are that oxygen under pressure favors its absorption through the skin and mucus membranes, and that by expansion of gases amniotic fluid and secretions are forced from the air passages. It is also thought that alternating changes in pressure will condition the infant's respiratory activity in a manner simulating that normally produced in passage through the birth canal.

This has become a very controversial subject. The physiologists state that gaseous exchange is not aided by the alternating variations in pressure which the machine uses. However, use of the machine has the indirect virtue of keeping the baby in a closed chamber where it is protected from the overenthusiastic efforts of unskilled personnel. Those hospitals in which it is in use believe that clinically it is of considerable value. Others have discarded it as being of no advantage over a well-constructed incubator.

HIGH INTERMITTENT PRESSURE

A new concept of expanding the lungs of very small prematures has been advanced by Day.[5] The essential principle of the concept is that it may be possible to expand the resistant lung of a very small premature by making, through a tight face mask, frequent short blasts of pressure which are above the limits of safe tolerance, if maintained for any length of time. By making pressures up to 40 cm. or even much higher for only a fraction of seconds at frequent intervals, the lungs and thorax are gradually expanded without running the risk of rupturing the lung.

Experimental work so far indicates that this method may prove to be highly successful in infants that were formerly thought to be hopeless. Equipment is being devised to carry out this procedure which should not be excessively expensive or difficult to operate. It is entirely possible that the next few years will see wide adoption of this concept.

Probably one of the greatest advances in the treatment of premature infants in the last few years is the free administration of oxygen. However, this has no doubt been carried to excess. Many of us have thought for a long time that this was used indiscriminately without due thought of its necessity, but believed that this excess was only wasteful. There is now considerable evidence that this excessive use of oxygen is undesirable and may be harmful to the small premature infant because of its aggravation or perhaps even cause of retrolental fibroplasia.

DANGER OF RETROLENTAL FIBROPLASIA?

It has been intimated in Europe for several years that the fact that very little oxygen is used abroad might be a factor in the very low incidence of the disease there. However, it remained for Szewczyk[6] to make definite observations on this condition. He found that hypoxic retinopathy tended to appear most frequently in babies kept in high, but also varying concentrations of oxygen for over six days. It was most severe in babies kept in varying concentrations for long periods of time. It was much less frequent and less severe in babies receiving oxygen in low concentrations. The disease can be produced by suddenly withdrawing babies from a high oxygen concentration, and can be made to regress by restoring them to an atmosphere of high concentration.

Whether high oxygen concentration is the cause or not of retrolental fibroplasia remains to be proved, but the idea has become so prevalent that oxygen is now being almost eliminated from premature infant care. It should be emphasized that Szewczyk does not say this at all. He says that a sudden withdrawal, or giving high concentrations over a period of time will cause it.

From 1942 to 1947 we[7] cared for 101 premature infants under 1,500 grams, six percent of whom suffered from retrolental fibroplasia. From 1948 to 1953 we cared for 519 premature infants under 2,500 grams, 120 of whom, or 22 percent, were under 1,500 grams. There were no instances of retrolental fibroplasia in any of these infants. There was no change in the care of these babies during this nine-year period, except the greater use of oxygen in the later group. All were given 40 percent oxygen for 48 hours after birth, and all under 1,500 grams were given continuous 40 percent oxygen from birth until they had regained this weight. The average amount of oxygen for those under 1,500 grams was 5,000 cubic feet per baby.

Gordon[8] states that in the Johns Hopkins nurseries infants under 1,500 grams are placed in incubators only if deemed necessary by the medical personnel, with a concentration of 30 to 40 percent oxygen. This is measured at eight-hour intervals. They are not kept longer than 24 hours, unless it is thought necessary by the medical attendants.

This seems to me to be extreme and unnecessary. Obviously oxygen should not be administered to premature babies unless necessary, but this necessity can be told by the child's color. In other words, if the color is pink, no oxygen is necessary. If the child is cyanotic or any other

color than pink, oxygen is necessary. The concentration of oxygen necessary to maintain his pink color is the correct quantity. This may be anywhere from 30 to 60 percent.

NEED FOR CONSTANT CONCENTRATION

This concentration should be kept as low as possible, but, more than anything else, it should be kept stable, at a constant concentration. This may be accomplished by an incubator that is so constructed that ventilation takes place only through a few predetermined unadjustable openings—that is, there should be no leaks.

The oxygen inlet tube should be in such a position that the incoming oxygen is well diluted before it strikes the baby. In some incubators the inlet tube is placed within a few inches of the baby's head, so that simply by changing his position the baby is subjected to varying concentrations of oxygen. This is very undesirable. In an incubator whose ventilation is determined by a small, constant-speed circulating fan, the oxygen concentration can be controlled by the oxygen liter flow valve. This will be from four to six liters per minute.

Regardless of the kind of incubator used, there is only one way to determine the actual concentration—by measuring the concentration at regular intervals, usually about three times in 24 hours, provided the nursery temperature is constant, and the oxygen supply is piped in at a constant pressure.

If the child is not kept in oxygen over six days, it is unnecessary to undergo a weaning into normal atmosphere, providing there is no respiratory infection or anemia present. However, if he has been kept in oxygen over a week, it is necessary to wean him into a normal atmosphere slowly. This may be accomplished by reducing the concentration by 20 percent increments at weekly intervals. For example, if the child has been in a concentration of 50 percent oxygen, it should be reduced to 40 percent, then in a week to 32 percent, and in another week to 26 percent oxygen.

OTHER TECHNICS

While oxygen alone has been the medium of choice for many years, formerly carbon dioxide was added. There have been some observations, particularly by Miller[9] that might indicate that the use of carbon dioxide did have a physiological basis. He has found that five percent carbon dioxide added to 20 percent oxygen is a more powerful stimulant to respiration for a healthy full-term infant than 100 percent oxygen. Also, full-term infants have their minute volume restored more rapidly when five percent carbon dioxide was added to oxygen concentration of from 12 to 95 percent oxygen, than when 100 percent oxygen was administered alone. The age of the infant had but slight effect on this response. We therefore may find small concentrations of carbon dioxide (not over five percent) returning to our procedures for resuscitation purposes in the asphyxiated newborn infant.

In addition to the use of oxygen in the management of newborn infants, and prematures with respiratory difficulties, the last few years have seen the addition of other technics. The recent interest in hyaline membrane pneumonia and the mounting evidence of the frequency with which it occurs have stimulated a great deal of investigation in the therapy and prophylaxis of this disease. Many observers have noted marked improvement in the condition of premature infants and newborns with respiratory distress when placed in atmospheres of high humidity, up to 90 percent. This might be termed as tracheal therapy, and has led to a great number of additions of many substances to our first treatments with increased humidity.

AEROSOL THERAPY

Aerosols are relatively stable suspensions of liquids or solids in air or oxygen. Numerous factors are involved in the determination of aerosol retention in the respiratory tract and diffusion into the blood streams. The most important factors are the particle size distribution, which depends essentially on the size of the nebulizer, and the precise technic employed, and the degree of disposition of the particles, which depends for the most part on their impingement, settling, and diffusion by brownian movement.

The pattern of the ventilatory curves, particularly the respiratory rate of the tidal aid, and the degree of bronchial spasm, which governs the penetration of the mist to the terminal bronchioles and alveoli, is also important. Aerodynamic factors such as turbulence and influence on the size and life of the particles themselves—namely, the stability and surface tension of the aerosols—are essential.

The selection of the proper nebulizer for the production of aerosols is of primary importance. True nebulizers differ from the atomizers in that they are constructed with a baffle which removes from the mist the large particles which cannot penetrate the lower respiratory tract and which on impinging there may irritate the patient's tongue and throat. The majority of the nebulizers which are commercially available are really atomizers.

TWO IMPORTANT FACTS

The exact particle size distribution of the aerosol governs the degree of retention and site of disposition. Two important facts should be kept in mind: (1) Larger particles, such as those produced by most commercial nebulizers, tend to be deposited on the tongue, pharynx, and larynx, and do not reach the bronchioles or alveoli; (2) the particles much smaller in size tend to be exhaled rather than deposited on the bronchopulmonary surface. At some optimum size, maximum alveolar deposition will occur.

Nebulizers should be constructed with a suitable baffle to remove the large particles and insure a uniform delivery of small particles, preferably with the majority of radii in the 0.5 to 2.0 micra range.[10] The life of inspired particles should be prolonged so that the lung will retain a high percentage of them. Penicillin and streptomycin aerosols are sufficiently stable and do not require the addition of glycerine. Most of the pharmaceutical preparations of the various epinephrine derivatives employed as aerosols contain up to 10 percent glycerine which lowers the vapor pressures, stabilizes the mist by lowering droplet vapor pressure, and reduces local irritation.

A second important factor which controls the particle size and persistence of aerosols is the surface tension of the droplet. Lowering of the surface tension may produce a different particle size distribution, but the stability may also decrease if smaller particles are formed. Commonly employed agents which lower the surface tension of the particles are the detergents.

In aerosol therapy, the following agents are used: water (the usual base), detergents, antibiotics, alcohol, and enzymes. These are all based on the theory that infection of the respiratory tract may depend upon changes in the physiology of the tract itself. Humidification therapy should be considered in the treatment of any irritation of the tracheobronchial tree. It is not easy to achieve 100 percent saturation in an environment of about 70°. Even if it is achieved at the oropharynx, the inspired air enters the bronchial tree, where the temperature is 90° or above if the individual has any fever. The air must not only be fully saturated, but must contain fine moist droplets to

(Continued on next page)

insure the high percentage of humidity as it passes into the lungs.

Whenever therapeutically indicated, continuous administration of cold water vapors or detergent aerosols should be introduced into enclosed oxygen tent units. The therapeutic objective to achieve is, first, high humidity. Above 95 percent relative water vapor saturation is best. Secondly, stability of small particle size aerosols is necessary, and third, an adequate cool temperature control within the tent. Lastly, it is very necessary to prevent raining out on the patient or tent of loose droplets of moisture when the humidified, moisture-laden air becomes rapidly dehumidified by impact with cold currents.

The temperature within the covering space should be at least 70°, and the relative humidity of 85 percent, both reached in 20 minutes. Oxygen concentrations of 50 percent and carbon dioxide of one percent are about average. The therapy should be continued for one to seven days.

HYALINE MEMBRANE DISEASE

The recent interest in hyaline membrane disease and the mounting evidence of its frequency have stimulated considerable investigation to its prophylaxis, and possible therapy. Many observers have noted marked improvement in the condition of prematures and newborn infants with respiratory distress when placed in an atmosphere of high humidity up to 90 percent. For this reason, all infants requiring resuscitation, those with respiratory distress, and infants delivered by cesarean section should be benefited by these procedures.

High humidities are best obtained by completely closed incubators (such as the Isolette, or Armstrong HH model Mark 111). There is also certainly a physiological basis, whether or not the clinical results may be debatable, of adding a detergent to this therapy. The one most commonly used is Alevaire, which contains 0.125 percent of oxylated tertiary octophenol formaldehyde polymer (triton WR 133) with two percent sodium bicarbonate and five percent glycerine.

This can be administered in full strength by means of a large reservoir nebulizer (I.E.C. No. 500 nebulizer Nebulaire). An oxygen flow of at least six liters a minute is required for the proper functioning of this nebulizer, and excessive high oxygen concentration may be avoided by opening the air vents or by operating the nebulizer with a mixture of oxygen and air. Opening the air vents does not interfere with the maintenance of a fine mist in the incubator.

There is no standard as to the length of time such therapy with detergents should be used. I do not like to use it for more than 48 hours, or on a short-term basis. Others will use it for several days. There does not seem to be any harm in this practice, but I do feel that any good that is going to be accomplished will be done by 48 hours. I then shift back to high humidity alone.

Occasionally a nurse will feel that a baby receiving detergent therapy, especially one suffering from hyaline membrane, has more difficulty when placed in this atmosphere. Under such conditions I withdraw the therapy at once and use oxygen alone. Also, in long-term detergent therapy a harmful effect may result from the plastic mechanism of incubators, and even their finishes.

NATURAL FOG

I have had no experience with fog therapy for newborns, but believe that there might be an idea here. In babies who did not require extra heat, in whom any form of incubation would be unnecessary, it might be of value. This therapy is based on the idea that when nature combines two streams of air, one chilled and one heated, the result is natural fog. Inasmuch as microscopic drops of water are needed to penetrate the tiny filaments of the respiratory system, this might be a procedure of value. Ordinarily when precipitation occurs these droplets have agglomerated into clusters of water too large to reach and moisten the microscopic bronchioles which feed air to the individual's lungs. Fog generators now obtainable remove these large droplets by cooling, warming, and recirculating the air. Here there is no chance of agglomeration, and without this there can be no precipitation. Without this precipitation true supersaturated humidity can be freely obtained and administered. In this way one can maintain in the space around the bassinet or bed any temperature wished, from 60 to 85°. This allows freedom of movement for the personnel, and ample space for the infant's care.

Other additions to aerosol therapy are the antibiotics. The ones most used at the present are penicillin 1,000,000 units in 500 cc. of diluent (this may be water or detergent); streptomycin 1.0 gram alone or combined is also used. These are given in approximately eight hours, as it takes this time for the evaporation of the 500 cc. of diluent, employing 12 liters per minute oxygen flow.

Alcohol vapor is used in adults for acute pulmonary edema. I am not aware that it has ever been used for the newborn. This is given in concentration at 35 percent placed in a reservoir with a long tubal connection, as a mixture of oxygen and alcohol is explosive. The therapy is based on the idea that alcohol increases surface tension, thus tending to prevent or eliminate frothing which might further block the bronchioles.

THE ENZYMES

The last substances to be mentioned are the enzymes. These again have been used almost exclusively in adults for debridement of the fibrinopurulent and mucus secretions of the tracheobronchial tree. An example of these agents is pancreatic dornase. This substance has the property of degrading desoxyribonucleoprotein, an important constituent of purulent exudate. There is no appreciable self-absorption of these products by the patient. This might be an idea in the treatment of hyaline membrane disease. The amount given in adults is 50,000 to 100,000 units of aerolized pancreatic dornase, repeated at six to eight-hour intervals. The length of treatment is two to six days. It is aerosolized by direct nebulizer-oxygen flow technic or by intermittent positive pressure breathing with a Bennett valve.

The use of inhalation therapy in the newborn and premature infant is one of the great advances in the treatment of the respiratory disturbances occuring in these children. Moreover, one has the feeling that as yet the subject has only begun. With further study and experimentation, this form of treatment can be utilized to its fullest extent.

1. Cole, Wyman, C. C., M.D., "Resuscitation of the Newborn Premature Infant," *Pediatric Clinics of North America*, August, 1954, p. 527.

2. Taylor, E. Stewart, M.D., "Blood Oxygen Studies in the Premature," *Pediatric Clinics of North America*, August, 1954, p. 587.

3. Sanford, H. N., M.D., and Day, Lewis R., M.D., "Electrophrenic Respiration," *AMA American Journal of Diseases of Children* (to be published).

4. Bloxsom, A., M.D., "Resuscitation of the Newborn," *Journal of Pediatrics* 37:311, September, 1950.

5. Day, R., M.D., et al., "Pressure-Time Relations in Safe Correction of Atelectasis in Animal Lungs," *Pediatrics* 10:593, November, 1952.

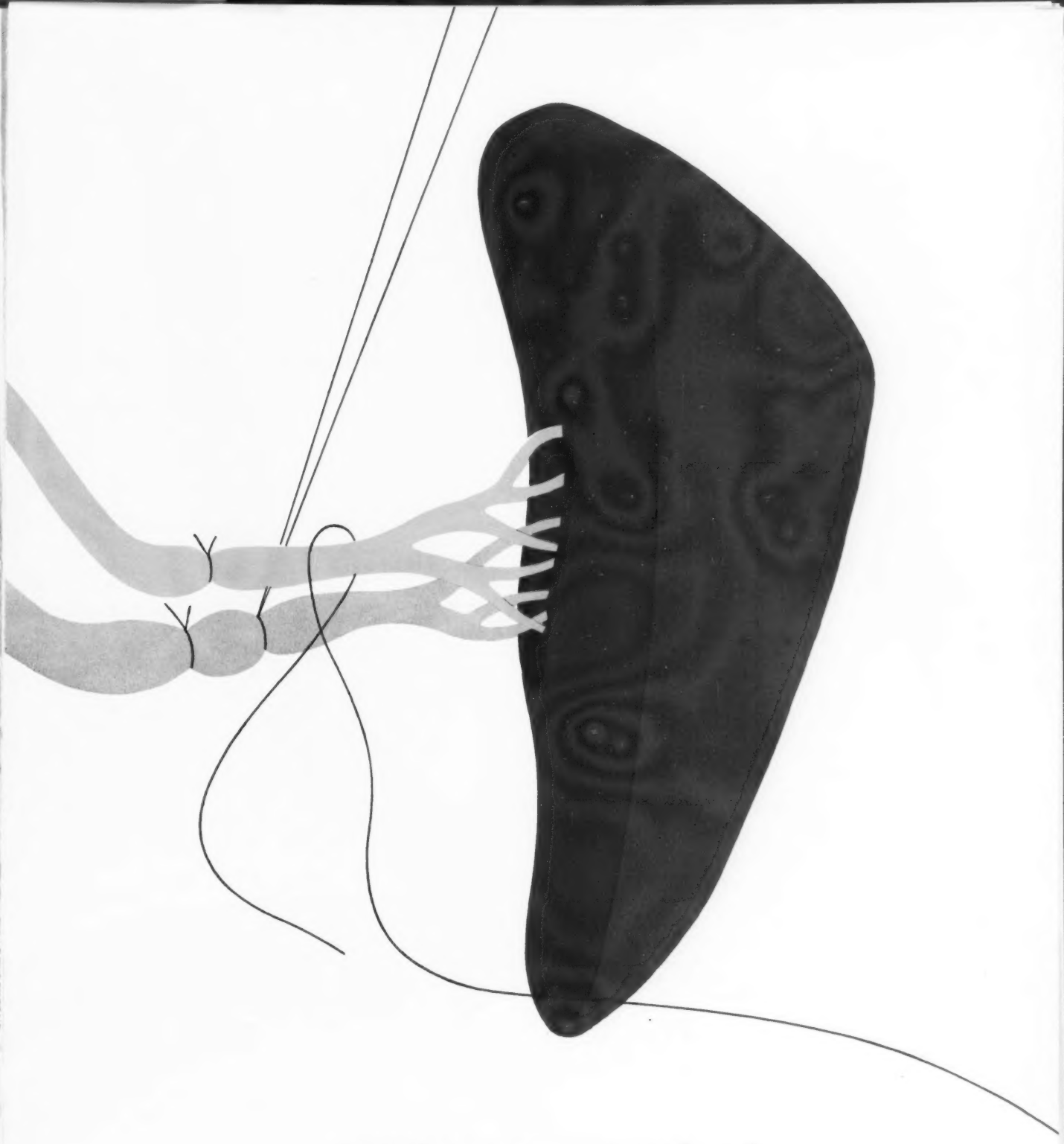
6. Szewczyk, Thaddeus S., M.D., "Retrolental Fibroplasia," *American Journal of Ophthalmology* 35:301, March, 1952.

7. Sanford, Heyworth N., M.D., "Factors Influencing Premature Mortality," *Pediatric Clinics of North America*, August, 1954, p. 573.

8. Gordon, Harry, M.D., "Administration of Oxygen and Retrolental Fibroplasia," *Pediatrics* 14:543, November, 1954.

9. Miller, H. C., M.D., "Effect of High Concentrations of Carbon Dioxide and Oxygen on Respiration of Full-Term Infants," *Pediatrics* 14:104, August, 1954.

10. Siegal, M. S., et al., "Advances in Inhalational Therapy," *Southern Medical Journal* 47:888, September, 1954.



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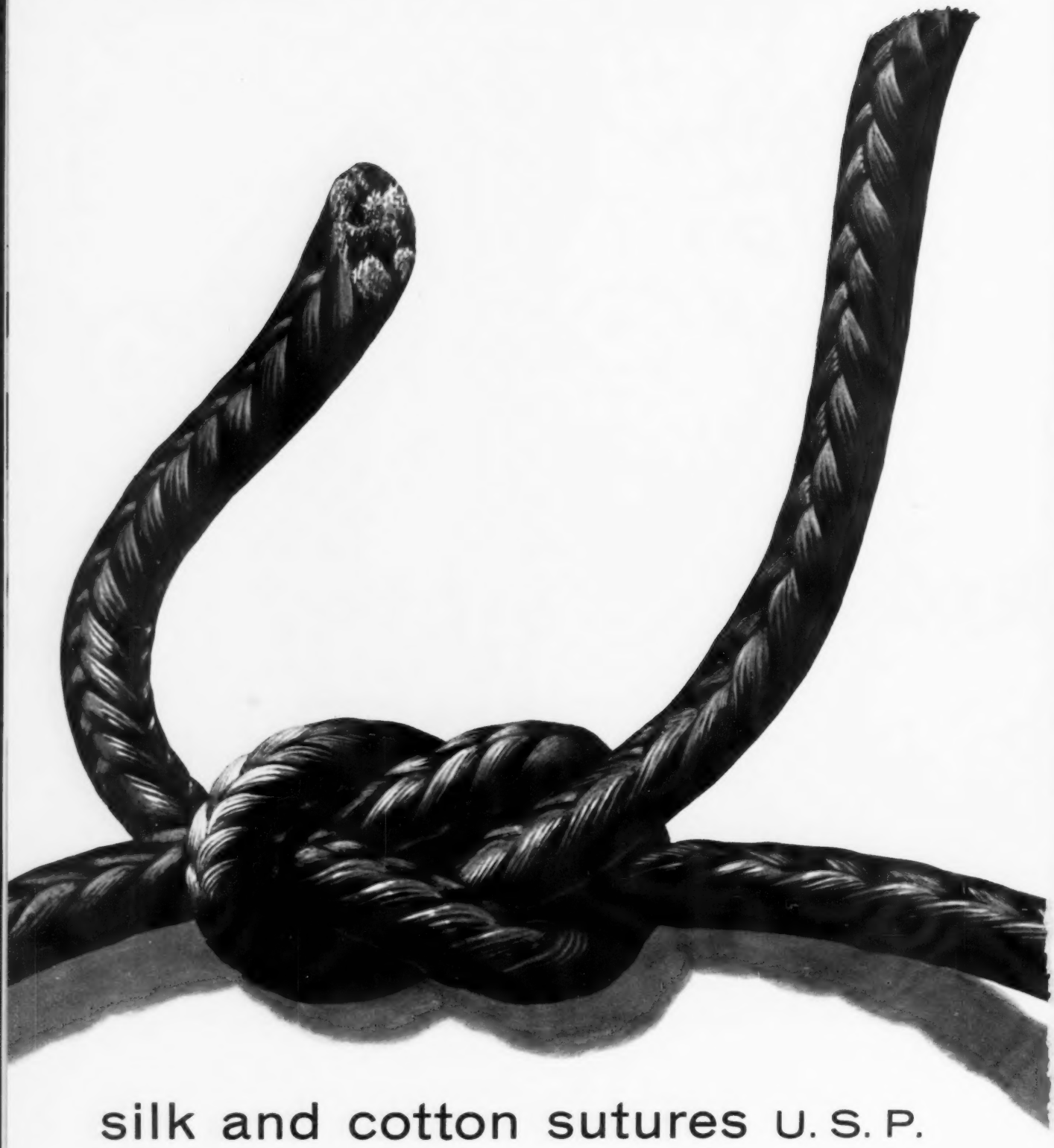

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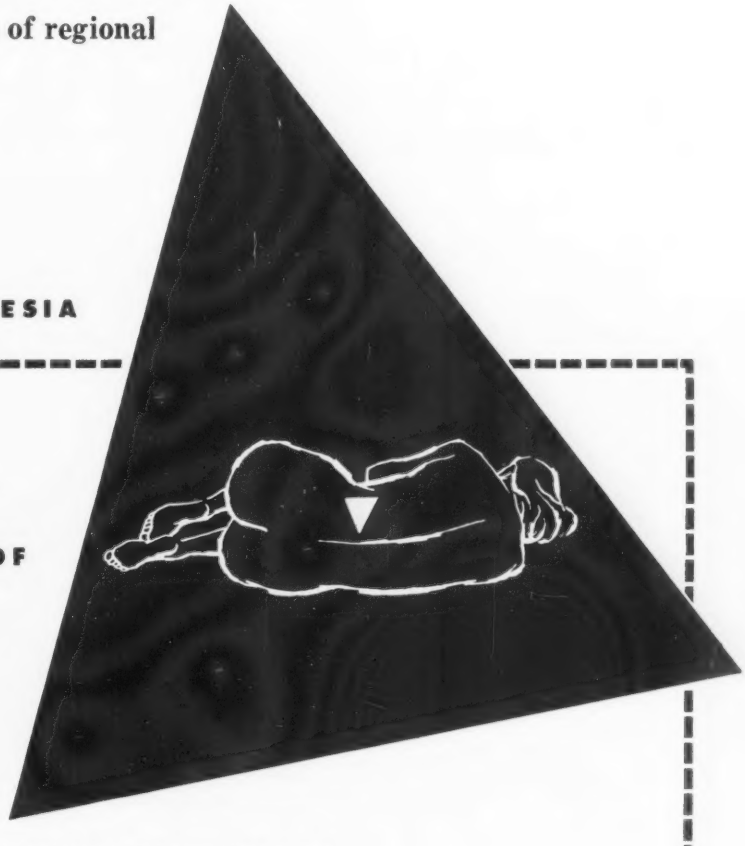

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*Bonica, J. J.: The Management of Pain. Philadelphia, Lea & Febiger, 1953, p. 475.

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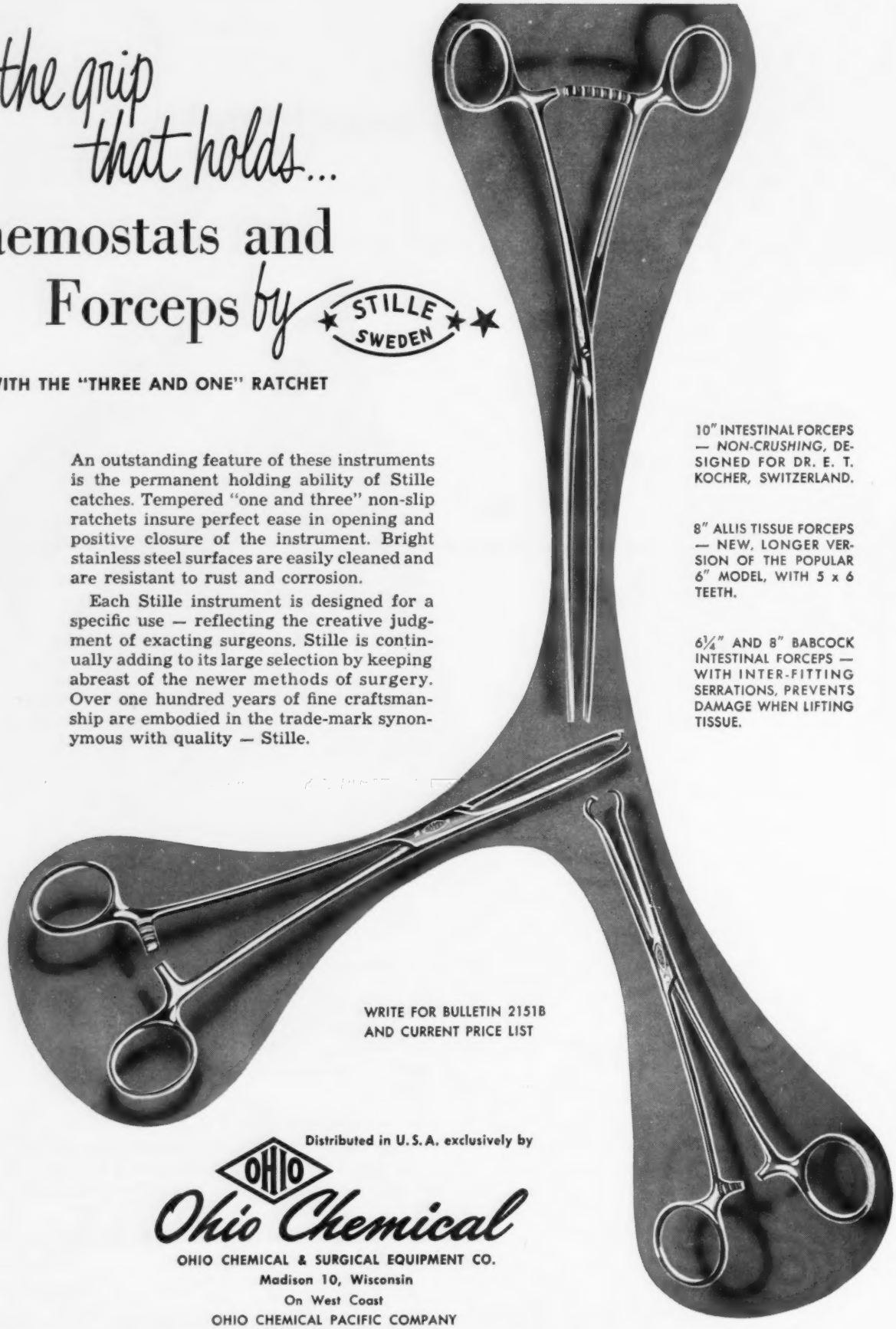

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Take a Look

...at what's in store
for you
at the 1955

AHA CONVENTION

ATLANTIC CITY
September 19-22

When you're not in the meetings, you'll want to take a stroll along the boardwalk . . . look in on one of the numerous auction sales . . . try your luck in a penny arcade . . . send some salt water taffy to your family or friends . . . snatch an hour or two to bask on the beach . . . and take home a souvenir photo from the TOPICS booth, to remind you of convention memories.

HOW TO GET THERE

The Pennsylvania railroad has frequent connections to Atlantic City from Philadelphia, and from New York City. The single fare trip is $2.71 and round-trip $5.41 from Philadelphia. The trip from New York City is $5.39 single trip and $10.78 round-trip.

If you're going from Chicago to Atlantic City by plane the one-way fare would be $48.79 and $92.73 round-trip.

First class railway fare from Chicago to Atlantic City would be $83.60 plus $25.42 for roomette or $19.31 for a lower, and $2.20 for chair car from Philadelphia—thus making a grand total of $111.22 or $105.11 round-trip.

For those coming from New England, the New York, New Haven and Hartford Railroad goes into New York City where connections are made for Atlantic City. (All railroads go to either Philadelphia or New York City where the transfer is made for Atlantic City.) If you are from below the Mason-Dixon line, either the Atlantic Coastline or the Southern Railroad will take you to Philadelphia.

WHERE TO EAT

(Reservations suggested for all places listed)

Bishop's Savoy
2528 Atlantic Avenue

Steaks and roast beef are specialties. Not much atmosphere in this converted bank building—but if you're looking for good food, you'll find it here.

Captain Starn's
over the water of the Inlet and the Boardwalk

Atmosphere aplenty aboard ship. The specialty? Sea food, of course.

Jack Guischard's
2520 Atlantic Avenue near Texas

Next door to Bishop's Savoy—and also noted for steaks.

Dock's Oyster House
2405 Atlantic Avenue

Small, unpretentious—but known for good sea food. Not far from convention hall.

Hackney's
at the Inlet near the end of the Boardwalk

Known as the nation's largest sea food restaurant. Choose your own lobster from those swimming live in a large tank.

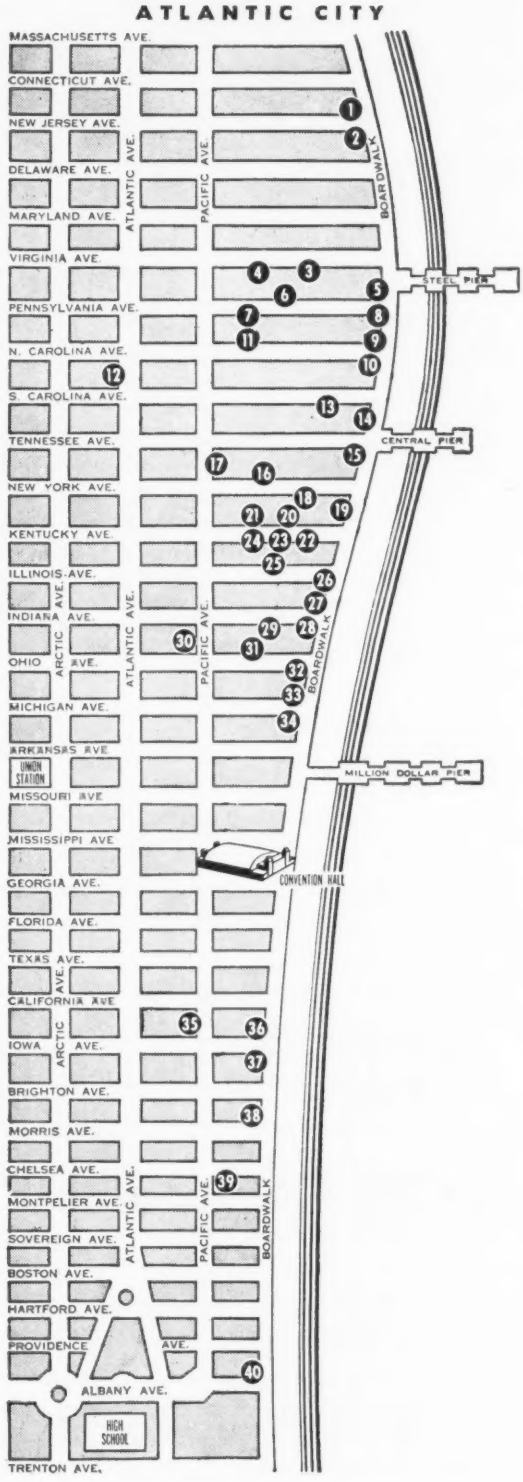
Latz Inn (Knife and Fork)
Atlantic, Pacific, and Albany Avenues

Attractive surroundings, excellent food—whether meat, fish, or fowl.

Mike Trench's Neptune Inn

Across the street from the Knife and Fork is this well-known sea food restaurant. Lobster is recommended.

Guide to the Boardwalk



MAP NO.	HOTEL
8	Abbey
37	Ambassador
21	Boscobel
1	Breakers
27	Brighton
9-10	Chalfonte-Haddon Hall
38	Chelsea
4	Clarendon
28	Claridge
7	Colton Manor
17	Columbus
29	Crillon
33	Dennis
30	Eastbourne
16	Flanders
35	Fox Manor
6	Holmhurst
23	Jefferson
24	Kentucky
11	Lafayette
18	Lexington
25	Madison
39	Mark
32	Marlborough-Blenheim
15	Mayflower
20	Monticello
3	Morton
14	New Belmont
12	Penn-Atlantic
40	President
36	Ritz-Carlton
31	Runnymede
2	St. Charles
5	Seaside
13	Senator
34	Shelburne
22	Sterling
26	Traymore (AHA Headquarters)

One of the biggest parts of the big show that is AHA is the "Merchandise Mart." For TOPICS' AHA product review, see the Buyer's Guide section in the August issue. The information will be valuable, whether you are attending the meeting or not.

(Continued on next page)

WHAT TO WEAR

Average temperature this time of year: 73°. It's likely to be hot during the day. For women, light-weight suits and dark, summer-into-fall cottons are practical. Bring a coat for evening. For men, light comfortable suits are advised—preferably those that hold their press well.

Don't forget your raincoat. No matter what time of year you're in Atlantic City, you should be prepared for a shower—or at least for the cold ocean spray you'll often feel as you stroll along the boardwalk.

Sun glasses are a must. Bring your swim suit if you think you'll find time for a dip. Average water temperature this time of year: 69°.

HOW TO GET AROUND THE CITY

If you've plenty of time, try Atlantic City's most picturesque form of transportation—the rolling chairs on the boardwalk. The little jitney buses will take you to or near many of the popular eating places. Cabs are usually plentiful—except when it rains. And if you like to walk, the Convention Hall is within walking distance of any of the boardwalk's principal hotels.

PROGRAM HIGHLIGHTS

Theme—"Working Together for Better Health"

The 57th annual AHA convention will feature more than 100 round tables, with audiences limited to about 35 persons each to allow maximum participation. The round tables will deal with such subjects as accreditation, civil defense, hospital planning, housekeeping, insurance, laundry, preventive maintenance and safety, purchasing, personnel and administration, public relations, research and statistics, small hospitals, state associations, and metropolitan councils and trustees.

On Sunday afternoon, preceding the official opening, the American College of Hospital Administrators will hold its annual convocation in the Convention Hall ballroom.

A brief description of each day's events follows:

Monday morning—House of Delegates. Formal opening of exhibits.

ACHA: Arthur C. Bachmeyer Memorial Address—Robert Maynard Hutchins on "The Administrator"

afternoon—opening session: "The Hospital and the Community;" Auxiliaries' "Get Acquainted Tea"

evening—reception and dance at the Hotel Traymore honoring President Frank R. Bradley, M.D.

Tuesday morning—House of Delegates. Forty round tables; concurrent sessions are "Civil Defense—Its Implications to Hospitals," and "Hospital Planning"

noon—luncheon for federal hospital executives. Speaker: Arthur S. Flemming, director, Office of Defense Mobilization, Washington, D. C.

afternoon—general session: "The Hospital and Blue Cross." Hospital auxiliaries' general session: "Expanding Services of the Hospital"

evening—annual dinner for AHA past presidents at the Shelburne Hotel's Diamond Jim Brady Room

Wednesday morning—House of Delegates. Forty round tables; concurrent session; "Civil Defense Planning." Hospital auxiliaries' general session: "Volunteer Services in the Field of Mental Health"

noon—luncheon honoring Catholic Sisters, Rose Room, Hotel Traymore. Speaker: Francis Cardinal Spellman

afternoon—general session: "National Activities in Coordinating Health Services." Hospital auxiliaries' "Project Parade" and tea

evening—annual AHA banquet. Induction of incoming president, Ray E. Brown, and presentation of Award of Merit and honorary memberships

Thursday morning—general session: "Extension of Hospital Relationships;" hospital auxiliaries' general session: "A Hospital is Ready for Accreditation—or Is It?" and "A Report from Washington"

noon—hospital auxiliaries' luncheon

afternoon—40 round tables; concurrent session: "Hospital-Physician Relationships"

evening—conventioneers taking the AHA cruise to Bermuda, September 24-30, leave for New York

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Personally Speaking

Joseph H. Pratt, M.D., 80, (seated left) was recently honored on the anniversary of his first efforts in the field of group therapy. He is an international leader in medical education, research, care and treatment— the Pratt Diagnostic Hospital was named after him. Shown with Dr. Pratt are: (standing l. to r.): Rev. Forest L. Knapp, executive secretary, Massachusetts Council of Churches, R. Rev. Norman B. Nash, Bishop, Massachusetts Episcopal church, and Haldean S. Lindsey, N.E. Medical Center chaplain. Seated with Dr. Pratt are Dr. Paul E. Johnson, Boston University school of theology and Joseph H. Kaplan, Boston Dispensary.

Myrtle McAhren, R.N.—administrator, Quincy (Ill.) Blessing Hospital, has resigned.

H. Louise Aul, R.N.—director of nursing, Masillon (O.) State Hospital, has resigned.

A. C. Baxter, M.D.—city health superintendent, Decatur, Ill., retired recently after 48 years of practice.

Anna Bevan—has been appointed assistant executive housekeeper, Southern Baptist Hospital, New Orleans, La.

Thelma Bergstresser — has been elected superintendent, Nason Hospital, Martinsburg, Pa. She formerly was superintendent, Brodstone Memorial Hospital, Superior, Neb.

Thomas P. Burns — has been appointed security officer, Albert Einstein Medical Center, Philadelphia, Pa. He will be responsible for coordinating internal security, safety, fire prevention, police protection and civilian defense activities at the center. He was formerly deputy commissioner of public safety, city of Philadelphia.

The Rev. Joseph Fillmore Coble—has assumed his duties as superintendent, Methodist Retirement Homes, Inc., Durham, N. C.

Homer D. Coggins—has been appointed administrator, Central Baptist Hospital, Lexington, Ky. He succeeds **Harold Warren,** who is now administrator, Hardin County Memorial Hospital, Elizabethtown, Ky.

J. Howard Docktor—has been appointed assistant administrator, Albert Einstein Medical Center, Northern Division. He assumes the post formerly held by Julius Gever, now assistant administrator of, Northern Division, Philadelphia General Hospital.

Gilson Colby Engel, M.D. — chief surgeon, Lankenau Hospital, Philadelphia, Pa. has resigned from the state advisory health board.

David A. Gee—has been promoted to associate director, Jewish Hospital, St. Louis, Mo.

R. J. Hanna, M.D.—has resigned as director of tuberculosis for Texas state hospitals.

Byron E. Holswade—has resigned as business manager, Spencer State Hospital, Charleston, W. Va.

Robey C. Knight—has been named business manager, Spencer (W. Va.) State Hospital. He succeeds **Byron E. Holswade.**

Glen Lamson—executive secretary, Iowa Hospital Association, has resigned. He will take a position as consultant in hospital administration, United States Public Health Service, Washington, D. C.

Col. Charles L. Leedham—has been appointed director of education, Cleveland Clinic Foundation. He succeeds **Fay LeFevre, M.D.,** who has been director of education for the last three years in addition to his other duties at the clinic.

Eleanor Lee, R.N.—has been appointed director of nursing, Presbyterian Hospital, New York City, and executive officer, department of nursing, faculty of medicine, Columbia University. Under a new administrative arrangement Miss Lee will captain a three-person team. **Marion D. Cleveland, R.N.,** as director of nursing service, will head up nursing care for patients in the hospital, while **Miss Helen F. Pettit, R.N.,** director of nursing education, and association professor of nursing, faculty of medicine, will be responsible for the educational program. The appointments were made following the recent retirement of **Margaret Eliot, R.N.**

Waldo R. McNutt—has been named administrator, Wise (Va.) Memorial Hospital, one of 10 hospitals in Kentucky, West Virginia, and Virginia being constructed primarily for beneficiaries of the United Mine Workers of America Welfare and Retirement fund.

Albert I. Mendeloff, M.D.—associate professor of medicine and preventive medicine, Washington University, St. Louis, Mo., has been appointed clinical chief of staff, Sinai Hospital, Baltimore, Md.

Connor Morehead—has been elected superintendent, Methodist Children's Home, Little Rock, Ark.

Harlan Newkirk—has been appointed to the staff, Morristown (N. J.) Memorial Hospital, as administrative resident.

Helen T. Nivison, R.N.—resigned as administrator, Hewitt Memorial Hospital, Ansonia, Conn. Her successor is **Mrs. Emma B. Ashcroft, R.N.**

Joseph B. Pincus, M.D.—has been appointed chief, department of pediatrics, Jewish Hospital of Brooklyn. He succeeds **Benjamin Kramer, M.D.,** who was recently promoted to the post of full consultant, pediatric department.

Sister Rosanna — has joined the

staff, Sisters Hospital, St. Joseph, Mo., as director of personnel and public relations. She was transferred from Austin, Tex. where she had been administrator, Seton Hospital.

Fred W. Schmid—has resigned as administrator, Grove City (Pa.) Hospital. He has accepted an appointment as administrator, Bradford (Pa.) Hospital.

Robert Stone—was appointed assistant director in charge of administration, Miriam rehabilitation division, Jewish Hospital, St. Louis, Mo.

E. White, M.D.—has been appointed superintendent, Harlingen State Tuberculosis Hospital, Austin, Tex. He formerly was superintendent, Wisconsin State Sanatorium.

Samuel White, Jr.—has been appointed administrator, Opportunity Home, Toledo, O. He formerly was administrative resident, Fitkin Memorial Hospital, Neptune, N.J. Opportunity Home is a convalescent hospital and rehabilitation center for children and adults, owned by the Toledo Society for Crippled Children.

Gerald D. Woods—has been appointed assistant administrator, St. Luke's Hospital, St. Louis, Mo.

William H. Wood, M.D.—has been appointed clinical director, Norways Foundation Hospital, Indianapolis. Dr. Wood will co-ordinate the diagnostic and treatment programs of the hospital. He will treat selected patients and participate in the training of psychiatric residents.

Daniel C. Wunderman, M.D.—formerly medical superintendent, Trumbell County Tuberculosis Hospital, Warren, O., has accepted a position with Washington University college of medicine, St. Louis, Mo.

VA Appointments

James R. Glotfelty, M.D.—manager, VA hospital, Lebanon, Pa., is being transferred to a similar position at the VA hospital, Durham, N. C. He succeeds the late **John J. Tyson, M.D.**

O. E. Herndon, M.D.—manager, VA hospital, Lake City, Fla., has resigned. He will now be with the regional office of the VA in Atlanta, Ga.

Ruth H. Junkin, M.D.—was appointed to the medical service staff, North Little Rock (Ark.) VA hospital.

Robert E. Stewart, M.D.—who organized the VA program in artificial facial and body restorations, has been appointed director, prosthetic and sensory aids service, department of medicine and surgery. He succeeds **Augustus Thorndike, M.D.**, who has resigned to return to Harvard University as chief surgeon, department of hygiene.

Wilson C. Williams, M.D.—chief, professional services, VA hospital, Nashville, Tenn., has been appointed manager of the hospital. He succeeds **Wibb E. Cooper, M.D.**

Deaths

Sister James Anthony—49, former director of nursing service, and principal, school of nursing, Mary Immaculate Hospital, Jamacia, Queens, N.Y., died July 10.

H. Sheridan Baketel, M.D.—82, physician and editor, died July 7. He was co-founder and editor emeritus, *Medical Economics*.

Samuel Barkoff, M.D.—42, president-elect, New Orleans Psychoanalytic Society, died July 11.

Oliver Hunt Bartine—former superintendent, Bridgeport (Conn.) Hospital, died July 6.

Edward M. Bernecker, M.D.—63, hospital administrator, New York University-Bellevue Medical Center, died June 27. He was former Commissioner of Hospitals, New York city, and personal physician to former mayor O'Dwyer.

Maxwell J. Fein, M.D.—57, New York pathologist, died July 15. He was a founding fellow and governor, College of American Pathologists, and founder of the Blue Shield movement in New York. He formerly was a pathologist at Brooklyn Cancer, Morristown, and South Nassau Communities Hospitals.

H. Wesley Jack, M.D.—61, surgeon and chief of staff, West Jersey Hospital, Camden, N. J. died June 20.

George M. Mandelbaum, M.D.—53, radiologist, Einstein Medical Center, northern division, Philadelphia, died July 5. He was medical director, Uptown Ladies Home for the Aged, Philadelphia, Pa.

Ernest David Resnik, M.D. — 57, Brooklyn gynecologist and obstetrician, died June 19. He had been associated with the Caledonian Hospital, Brooklyn.

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NURSE ANESTHETISTS: (a) Middle West. 250 bed hospital. $500. (b) Pacific Northwest. 100 bed hospital, fully approved. $550. (c) East. 225 bed hospital near Pittsburgh. $450 full maintenance. (d) Texas. 250 bed hospital in large city. Fully approved. $450. (e) Pacific Northwest. 125 bed hospital near Seattle. Unlimited recreational opportunities. Housing no problem. $450.

DIETITIANS: (a) Chief. California. 235 bed hospital near San Francisco. Require A.D.A. $6000. (b) Chief. California. 500 bed hospital. 8 dietitians in department. Dietary department has been completely reorganized and has all modern equipment. $6000. (c) Teaching. B.A. in Home Economics. 400 bed hospital in large eastern city. $4500. (d) Assistant. Complete charge of therapeutic diets; some teaching. 220 bed hospital. (e) Chief. Middle West. Within commuting distance of Chicago. 200 bed general hospital. $5400 plus maintenance. (f) Therapeutic. Middle West. 200 bed hospital, fully approved. $4500. (g) East. 325 bed hospital in city of 65,000. Have just completed an expansion program and dietary department is new and modern; new kitchen and cafeteria. $5000.

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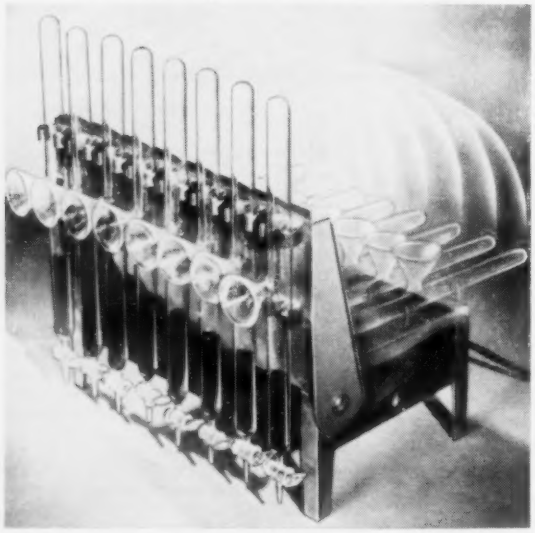
BUYER'S GUIDE

• If you are interested in receiving additional information on any of the products in this review, just check the number on the postpaid reply card opposite page 64. See the August issue of **HOSPITAL TOPICS** for special AHA convention product preview.

910. Steel platform trucks

Tilting and non-tilting steel platform trucks are for light, medium, and heavy-duty service. Trucks combine lightness with maximum strength and are very attractive. All units, except heavy-duty models, will be shipped knocked-down as "packaged" components. American Pulley Co.

911. Automatic separatory funnel



VirTis Extracto-Matic, the automatic separatory funnel, takes the work out of making extractions, and yields faster more complete results, according to the manufacturer. Unit consists of compact box type stand which houses a heavy duty 110 volt, a.c. motor. Clamps mounted on a rocker arm firmly hold eight specially designed separatory funnels. Up to eight extractions can be performed at one time. E. Machlett & Son.

912. *Hospital innerspring mattress*

Hasco Resisto-Mat mattress is resistant to all body excretions, waterproof, flame resistant, acid proof and washable. Coil unit is guaranteed for 10 year period. Harold Supply Corp.

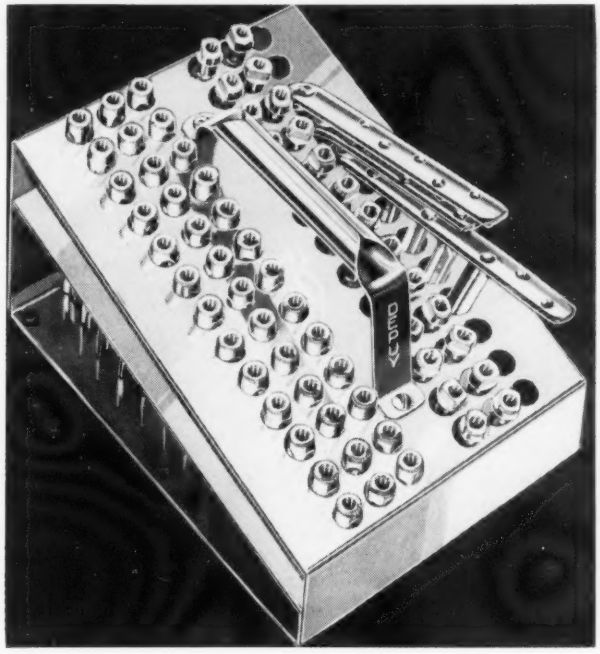
913. Sterilizing basket

New sterilizing baskets for immersion washing can be used for washing china and glassware. Plastisol coated insert surrounded by a protective wire frame protects china against contact with metal. Metropolitan Wire Goods Corp.

914. Brunswick cabinets

Here is a new concept in cabinet design that utilizes interchangeable panels, shelves and parts, to provide many types of cabinet combinations. Accented with color on sliding doors, these cabinets have surfaces coated with miracle plastics. Cabinets can be used as room dividers, mobile cabinets, and for reception rooms and offices. The cabinets are designed to integrate with the modern decor desirable in hospitals. Brunswick Balke Collender Co.

915. Sterilizing rack



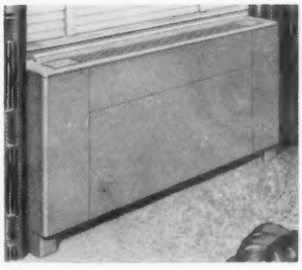
Sterilizing rack which prevents damage to nails and screws during autoclaving has been introduced. Stainless steel rack is quickly loaded and will handle several dozen Smith-Petersen nails, Jewett nails, Lorenzo screws. Nails and screws can't fall from rack in transit. Unit has convenient carrying handle. DePuy Manufacturing Co.

916. Hydromassage

Portable whirlpool unit produces flowing force of rapidly whirling water. Vibratory action is caused by inducing air bubbles into highly agitated water. It helps increase circulation, reduce muscle spasm and pain, improves tissue oxidation. Jacuzzi Brothers, Inc.

917. Air-conditioner

Compactness, uniformity of air discharge, and quietness of operation make the new units ideally suited for installation in hospitals. American Blower Corp.



918. Nursing bottle

New heat-resistant bottle features a rubber cap that protects the nipple from the time the unit is sterilized until the baby is fed. Bottle has an oval non-roll shape, and a wide tip-proof base. Exclusive protective rubber cap allows nurse to prepare, store, and feed without touching the nipple. Corning Glass.

919. Fruit crystals

These crystals can be used in place of squeezed citrus fruit juices for delicious lemon and lime flavor drinks, mixed drinks, sherbets, frostings, and sauces. They are always ready for instant use, and require little storage space. Cramore Fruit Products, Inc.

920. Antiseptic hand soap

Acto-Lan contains both lanolin and Actamer. Available in both powdered and liquid forms, it is said to combine excellent cleansing properties with gentle germicidal action. Monsanto Chemical Co.

921. Autoclave labels

These autoclave labels have special vinyl coatings and inks to withstand steam and heat in the autoclave. They stay on the package, and the ink will not run or fade. Labels with large type quickly identify central service items. Time autoclave labels are also printed for nursing service, solutions room, lab, pharmacy, and blood banks. Labels help prevent errors and standardize procedures for collecting specimens, marking equipment during sterilization, marking drugs and solutions, microscope slides. Colored labels for coding diets available. Professional Tape Co.

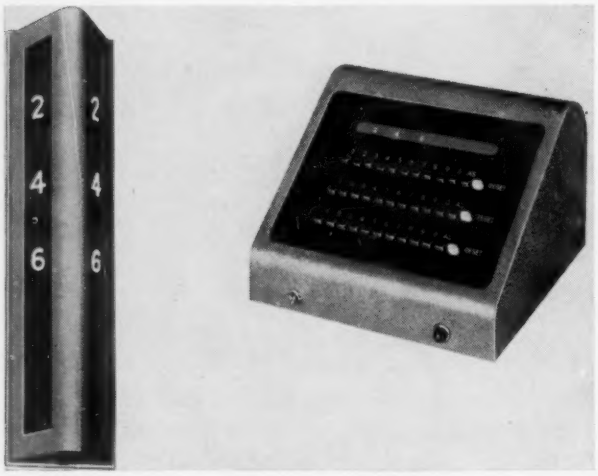
BUYER'S GUIDE

Continued

922. Assistor for anesthesiologist

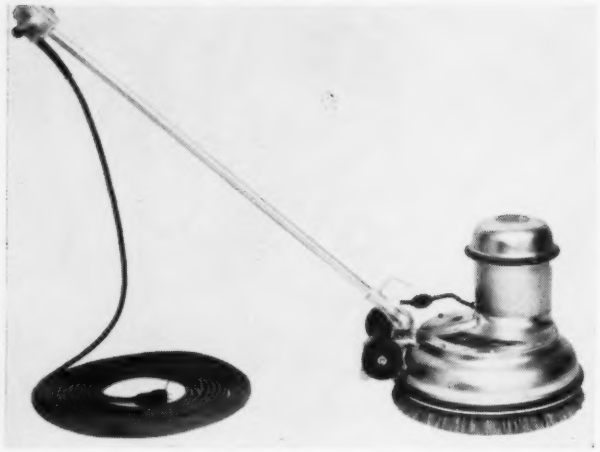
Inexpensive assistor squeezes anesthesia bag automatically. Plexi-glas housing encloses the bag and attaches to any anesthesia machine under the carbon dioxide absorber. Unit can be adjusted to any height and a door is provided in front to allow the anesthesiologist to return to manual squeezing or dump bag quickly when necessary. Globe Industries, Inc.

923. Doctor's paging annunciator



This annunciator has two illuminated surfaces that can be seen from three directions eliminates the need for triple-faced annunciators. Can be mounted on walls or "T" corridor intersections. Also pictured is the compact doctor's paging selector keyboard. Change is primarily in the casing to provide standardization in master keyboard selectors, affording rapid delivery schedule on custom equipment. Auth Electric Co.

924. Floor machine



Designed for larger floor area and for extra heavy duty, 19-inch machine has offset motor design that provides balanced power by minimizing torque and counterbalancing weight of the handle. Many different brushes and attachments are available so unit can be used for any floor maintenance job. Adjustable handle has automatic release switch allowing full control at all times. Kent Co.

925. Evaporated apples

Apple pies, apple tarts, stewed apples and apple sauce made with evaporated apples cost less than fresh. They are available all year around and may be kept in cold storage. Pictured above is an example of how 10 pounds of fresh apples are peeled, cored, sliced and dehydrated to produce one pound of evaporated apples. When soaked in water they can be used to make four pies. Valley Evaporating Co.

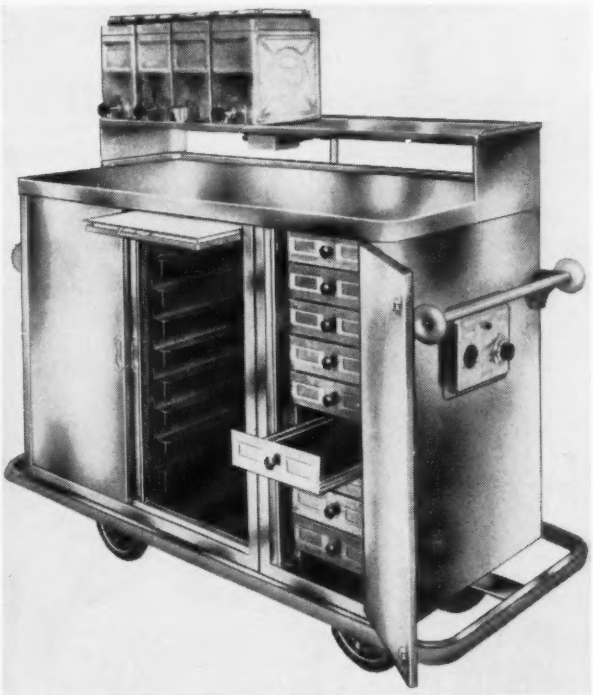
926. Cleaner and conditioner

Rexair "Rainbow" appliance is designed to meet hospital standards. Without attachments it functions as an air washer, humidifier, deodorizer and vaporizer. With attachments it cleans and shampoos rugs and upholstered furniture, dusts, cleans, scrubs and waxes wood, tile or linoleum floors. This cleaner uses a water basin to wash the air, trap and hold dust and dirt in place of conventional cleaner bag. Martin-Parry Corp.—Rexair Division.

927. Cover-glass dispenser

Fill the dispenser with a one ounce supply of covers; then just turn the wheel and cover rolls out for fast serving. Covers are easy to pick up—no fingerprints; breakage is reduced. Holds all common sizes and keeps glasses dust-free. Dispenser is all stainless steel; base diameter 4½". American Hospital Supply Corp.

928. Central tray conveyor



Central service tray conveyor for hot and cold foods permits efficient, rapid transport of 18 complete meals, including dishes, trays, flatware and beverage, direct from kitchen to serving area. Truck is divided into two main sections—one refrigerated, the other electrically heated. S. Blickman, Inc.

929. Surgery cap

Members of the New York A.O.R.N., in an unbiased survey, chose the Marvella nurses' surgery cap as the type best suited to operating room work. New cap fits every head size, completely covers every type of hair-do, and meets every operating room requirement for sanitation and safety. It is cool, comfortable and neat, according to the manufacturer's report. Cap is available in choice of two styles—elastic or drawstring back. Hollywood Turban Co.

930. *Air warning device*

Federal Civil Defense officials have approved this new type of auxiliary air raid warning device for use in schools, hospitals and other public buildings. Gas-powered units can be heard more than 500 feet away; has Falcon signal horns designed to augment standard air raid warning signals. Designed to help end confusion in institutions and other buildings which currently use fire warning bells as supplementary air raid alarms. Falcon Alarm Co., Inc.

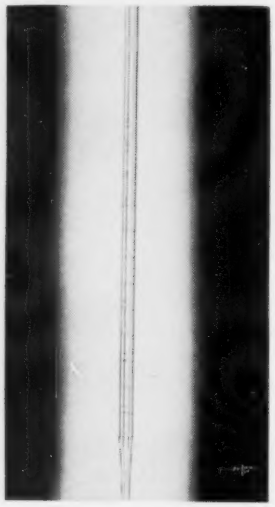
931. Instrument cleaner

Instruments and equipment used in surgery, and lab work can now be kept rust-free and corrosion-free in minimum cleaning time with the lubricating, water repellent and bactericidal qualities of Surgeosil. Combines the advantages of silicone spray with those of alkyl dimethyl benzyl ammonium chloride. Contained silicone in Surgeosil makes it colorless. Rals Laboratories.

BUYER'S GUIDE

Continued

932. New pipette



Pipette is designed to facilitate performance of venereal disease research laboratory tests for syphilis. Have a capacity of 0.5 ml. and are subdivided into increments of 0.05 ml. Shorter than usual, this instrument makes it easier to control the tip when transferring material to a slide. Individually retested for accuracy they have permanent colored filler in lines and numbers. Sturdy delivery tips with finely ground bevels reduce tip breakage to a minimum. Owens-Illinois Glass Co.

933. *Electric tonometer sterilizer*

Sterilizer is designed to prevent transmission of infections due to submersion of tonometers in contaminated cold sterilizing solutions. Provides automatically timed dry heat to a temperature of 475 degrees F. in 7 minutes. J. Sklar Mfg. Co.

934. Viscose rayon fiber ball

Man-made viscose rayon fiber is now available for hospital use in ball form. Made with a special fiber developed after 10 years of research, is has all the favorable characteristics of absorbent cotton, yet is softer, smoother, and cleaner.

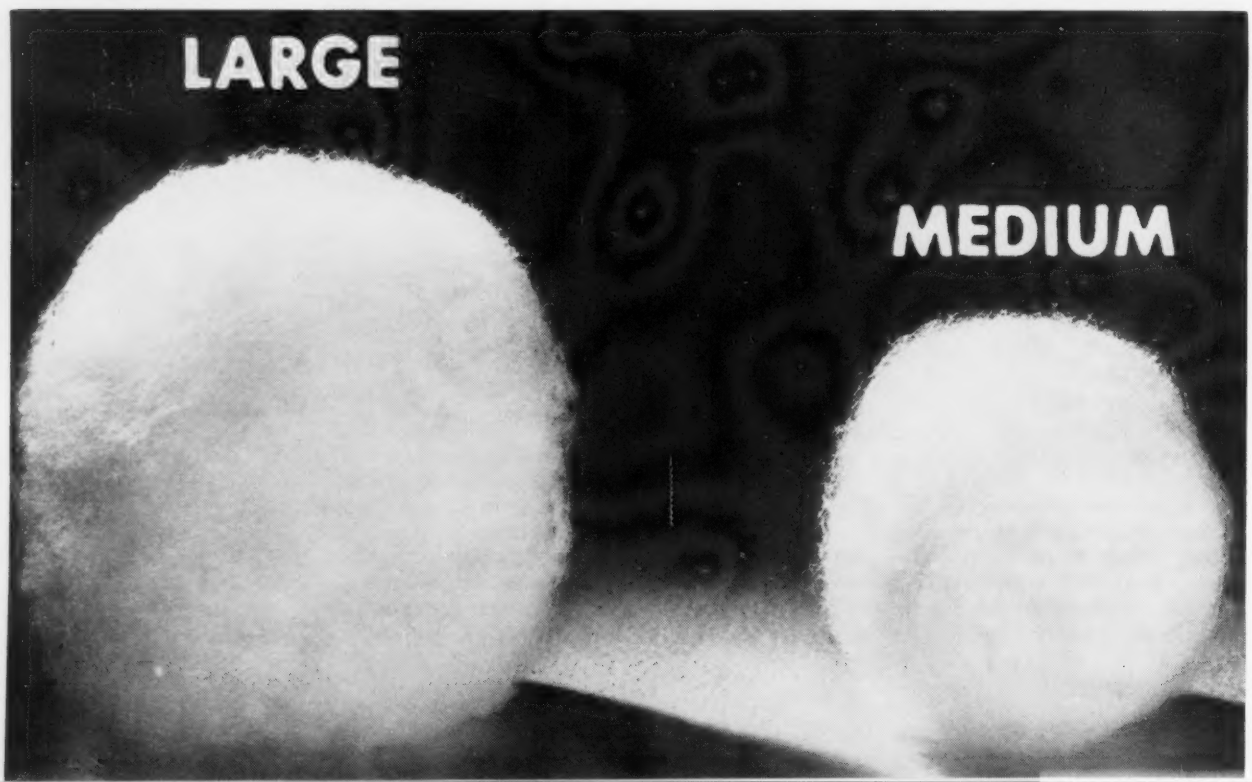
935. Denture container

Heavy-duty, disposable container designed for patients' dentures; helps save time and eliminates the messy chore of cleaning and sterilizing glass, crockery or metal containers. Printed in green and white, container has a tightly rolled rim, and is treated with a heavy wax finish for strength and rigidity. Lily-Tulip Cup Corp.

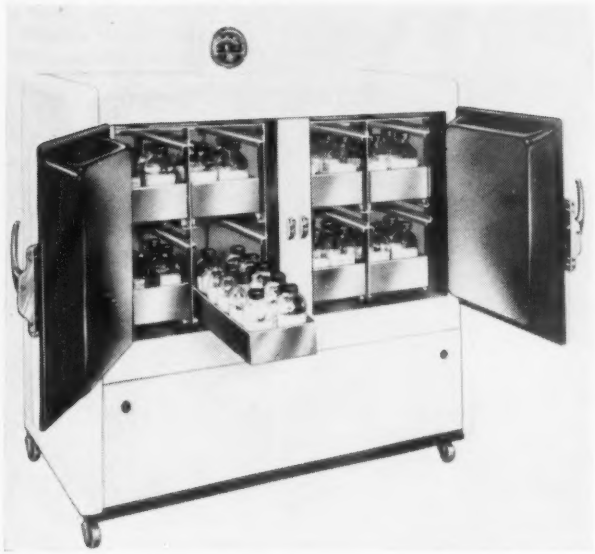
936. Elastic bandages

Durocel plastic foam bandage is for use as a cast-padding material. Enables user to make comfortable casts in quick two-step procedure. Exhibits no thermoplastic properties; shows no tendency to change shape when subjected to heat. Zimmer Mfg. Co.

These absorbent balls are the only surgical rayon balls which retain their pure white color after steam sterilization. Balls are packaged in two sizes to meet every need. Johnson & Johnson.



937. Portable blood bank

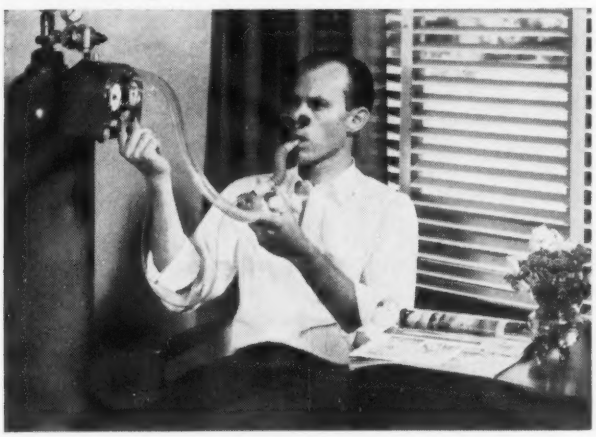


Blood bank, with 80 bottle capacity, can be spot located wherever blood and serums are needed. Heavy duty rubber casters enable one person to move it easily and silently. Model is equipped with double warning system consisting of visual indicator and audible buzzer alarm. Sensitive feeler bulb is immersed in cylinder of glycerine to record actual corresponding temperature of blood in bottles. Brewer-Titchener Corp.

938. *Variable speed rotator*

Variable speed rotator for serological procedures insures constant speed at any setting within its speed range; without fluctuation due to line voltage variation. Assures maintained speed at any setting within its range of 100 to 220 r.p.m. Eberbach Corp.

939. Monaghan valve

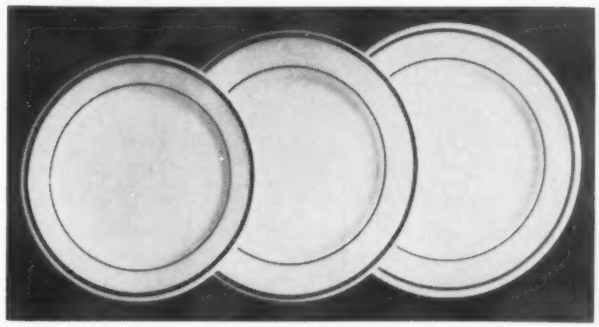


Valve provides intermittent positive pressure breathing therapy where dyspnea, chronic loss of pulmonary function, and inadequate ventilation of Apneic conditions are present. New advances in machines: mixes oxygen and atmosphere, nebulization permitted on inspiration only, and push-button resuscitation. J. J. Monaghan Co.

940. Explosion proof vacuum

Wet-dry vacuum cleaner is for use in atmospheres containing gasoline, Hexane, naphtha, benzine, butane, propane, alcohols, acetone, benzol, lacquer, solvent vapors and natural gas. Machine is powered by a ⅞ HP by-pass, moisture-proof motor. Convenient dump valve, rubber bumper, swivel caster-wheels. Machine is available with various combination of cleaning accessories and tools. Clark Sanding Machine Co.

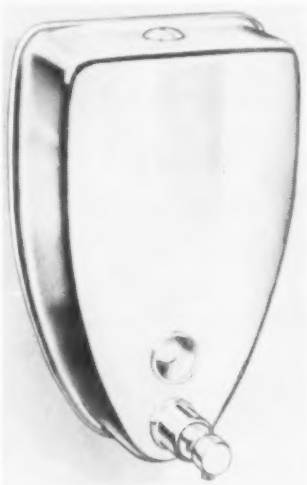
941. Extra strong dinnerware



Pictured above (l. to r.): salad plate, bread and butter, and larger bread and butter plate from Corning's institutional dinnerware set. The white surface never grows dull; there is no surface glaze to wear away or scratch through. Sticky foods wash off smooth, hard surface easily—no deep scratches hold dirt or grime. Decorated with green or maroon bands, dinnerware will survive breakage from a height twice as great as other ware. Cup handles will not break off in use. Corning Glass Works.

942. Soap dispenser

Wall-mounted liquid soap dispenser has tear drop design. Unit is of all metal construction which assures exceptional durability, and makes it especially well adapted for use in hospitals. Brass container has heavy chromium plate finish, and protective nickel plate coating is inside. Valve is bronze, with working parts of stainless steel, to prevent corrosion; push-in type delivers soap. Imperial Brass Mfg. Co.



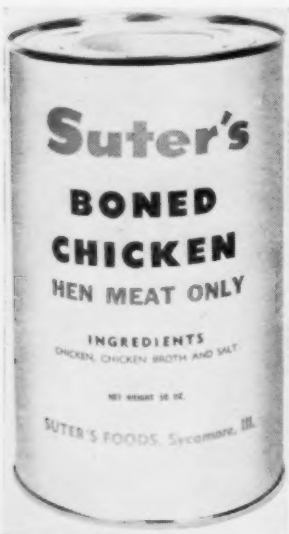
Continued

943. Prothrombin clotting timer

This unit features a blood clotting timer consisting of constant temperature bath with timer, stirrer and lighting provisions for a simple, quick method of assay. Apparatus is completely packaged and coordinated, eliminating variables and allowing consistent reproduction of a given test. Modern Laboratory Equipment Co., Inc.

944. Pre-cleaned microscope slide

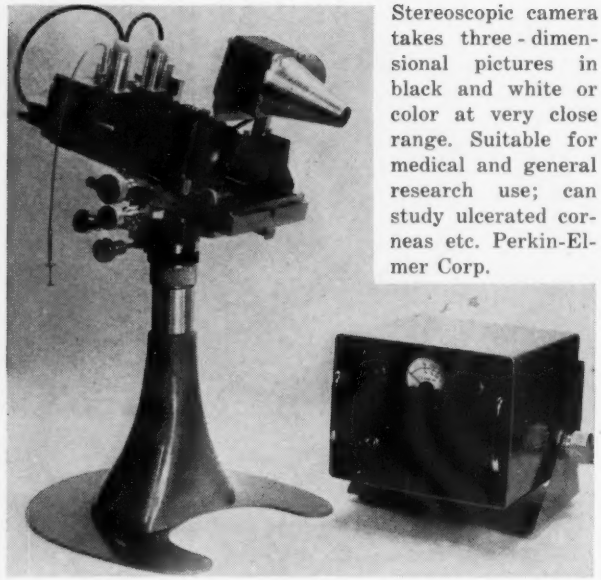
These pre-cleaned slides eliminate the traditional 24 to 72 hours cleansing procedure required, according to the manufacturer. They permit a smoother smear dispersion. Just remove slide from container, make the smear and stain and place under microscope. J. Melvin Freed, Inc.



945. Boned chicken

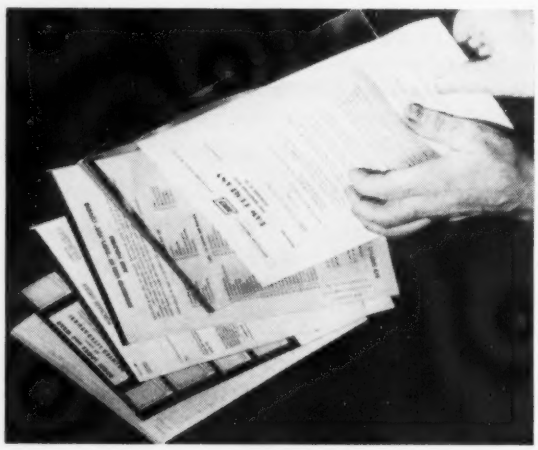
Boned chicken is recommended for sliced chicken sandwiches, salads, hot chicken. Specially packed to preserve fresh-cooked flavor, meat is tender yet firm and uniform. Uniformity of pack provides complete portion and cost control. Available in 50-ounce, 28-ounce, and 8-ounce tins. Also available with low sodium for dietetic menus. Company also has quantity recipe cards for making chicken salads and creamed chicken dishes. Suter's Foods.

946. Camera



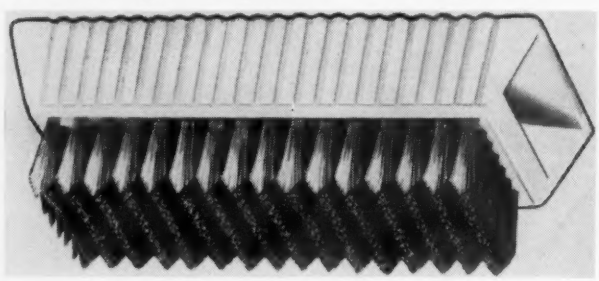
Stereoscopic camera takes three-dimensional pictures in black and white or color at very close range. Suitable for medical and general research use; can study ulcerated corneas etc. Perkin-Elmer Corp.

947. Color-coded acetate holders



Data that requires routing and quick-reference filing can be protected from grease, dirt, water and smudgy fingers—yet remain completely visible, quickly identified, and easily handled, in this color-coded acetate route-and-file holder. Available with five different color-coded taped edges. Each holder has one sheet of acetate closed at one edge with colored tape. Baw Co.

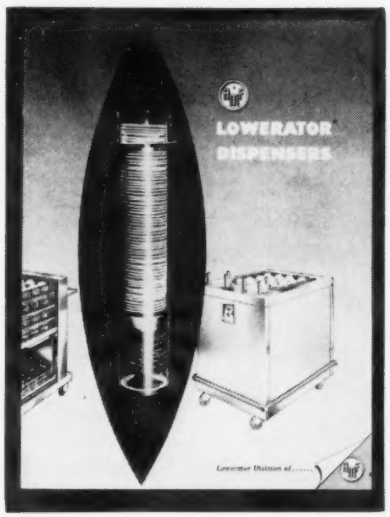
948. All-nylon surgeon's hand scrub brush



Brush is made entirely of nylon—both back and bristles. Bristles are secured into block with nickel silver anchor pins and ends of bristles are chisel cut for better scrubbing job; has soap retainer on under side. Guaranteed to withstand 400 autoclavings. Anchor Brush Co.

FILMS AND NEW LITERATURE

950. Lowerator dispensers



Complete line of lowerator dispensers shown in 24-page catalog. Included are: specifications, dimensional drawings, and tables of sizes for the line. Includes planned system for automatic dispensing and storage of dishes, cups, saucers, and bowls. American Machine & Foundry Co.

951. Therapeutic catalog

Therapeutic Furniture and Equipment is a new catalog released by Jay L. Warren, Inc. Equipment shown: relaxation chairs, tray combinations, feeding board with dish and cup; basic chairs, physical therapy stools, and shoulder wheels. Line was designed with assistance of many of the country's doctors and therapists.

952. Operating table usage

Here is a 62-page manual that explains the important details of surgical operations and their bearing on operating tables in simple, laymen's language. Publication will be of help to the operating room nurse in observing a few principles of surgical posturing. American Sterilizer Co.

953. Oxygen manifold folder

Advantages of the double-row duplex oxygen manifold are featured in a new illustrated folder. Described are: automatic switch-over, space-saving design with greater oxygen capacity, and audio-visual switch-over alarm system. Ohio Chemical & Surgical Equipment Co.

954. Solves mass feeding

How to Cut Food and Labor Costs is a new 32-page illustrated booklet that points out many problems that daily plague hospitals and institutions. Explained are ideas on portion control regarding meats. Colonial Beef Co.

955. Parenteral administration

A beautifully illustrated 52-page book on parenteral administration technics and equipment, with a comprehensive clinical analysis chart of transfusion reactions. Abbott Laboratories.

956. Improve washing procedures

Diamond Washroom Digest features ways of improving washing procedures for viscose and cuprammonium rayon fabrics. Bulletin traces manufacture of man's first synthetic fiber from raw material through finished product, discusses critical quality-control factors involved, and gives tips on rayon laundering. Diamond Alkali Co.

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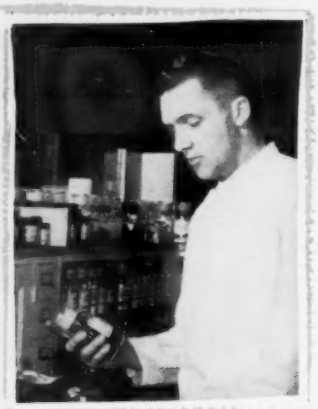

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The Book Corner

Cumulative Index of Hospital Literature

Prepared by the staff of the Asa S. Bacon Memorial Library, American Hospital Association. Published by the AHA, Chicago. 513 pages. $6. Covering hospital literature published from 1950 through 1954, the cumulative index lists items according to author and subject. Because hospital administration requires a knowledge of so many fields, this index includes references to hospital literature in medical, nursing, public health, business, architectural, and other periodicals. More than 300 journals are listed.

Hospital administration has made great progress during the last 10 years, and consequently the volume of literature has increased. This second cumulative index is the locating tool for articles written during the last five years. The first volume covers material published from 1945 through 1949.

The Diabetic's Cookbook

By Mrs. Clarice B. Strachan. Published by the Medical Arts Publishing Foundation, Houston, Texas, priced at $6.50 a copy. This unique book brings to the diabetic more than 250 recipes for foods and beverages that he can eat and enjoy.

The author of the new cookbook, Mrs. Clarice B. Strachan of Tulsa, Okla., developed and proved the recipes over a period of 14 years when she cooked for her diabetic son. She has combined a strong scientific background with the artistry of the kitchen to produce a volume which will add variety and zest to the diabetic's menu.

Cost of Medical Care For the Aged

By George H. Houck, Oswald Nielson, and Calvin W. Churchill. Published by the Graduate School of Business, Stanford University, Stanford, Calif., priced at 75 cents a copy. On January 1, 1952, members of the faculty of Stanford's medical and business schools, and Chico State College undertook a study of the costs of medical care at the Masonic Home for the Aged, Decoto, Calif. The report of their year's study covers the nature of medical care, the direct costs such as payroll, costs of hospitalization, surgical supplies, dental expense, refractions, and kinds of illnesses treated.

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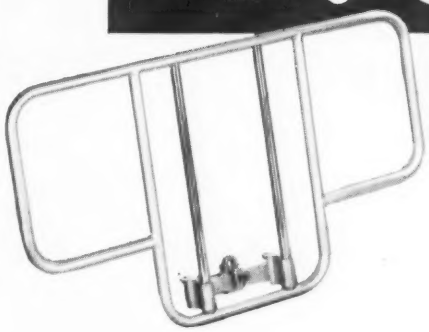

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to any type of wood or metal bed, including the adjustable high-low beds.

● The purpose of any sideguard, of course, is to prevent the patient from falling out of bed. The fact is, however, that the long side guards that have been commonly used may—and often *do*—serve to make a fall more serious, rather than to prevent it. If the patient insists on getting out of bed, and has the physical strength to do so, the *long* guard will not prevent him. It is the consensus of hospital people who have seen and used the Hill-Rom Safety Side that it will take care of 98% of all cases requiring side guards. The comparatively few cases that may require a full length sideguard can be taken care of by affixing another pair of Safety Sides to the foot end of the bed.

Safety Sides—A New Safety Measure
by Alice L. Price, R. N., M. A.
author of "The Art, Science and Spirit of Nursing"
This Procedure Manual explains in detail how to effectively use Safety Sides to prevent bed falls and to avoid serious injury to patients. Copies for Student Nurses and for the Graduate Nurse Staff will be sent on request.

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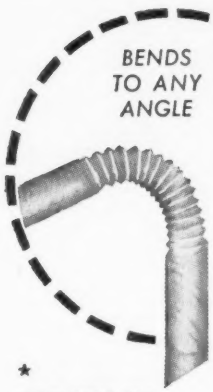

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TRADE TOPICS . . .

Ethicon Representative Killed in Plane Crash

Morris W. Akin, 54, Ethicon sales representative for the Connecticut Massachusetts territory, was among the 30 persons killed in an American Airlines plane crash August 4.

He is survived by his wife Therese and son Robert.

Adrian Comper Joins Ritter Co.

Adrian Comper recently joined Ritter Co. as manager, medical-hospital division.

He was previously associated with American Sterilizer Co. for 14 years.

Mr. Comper is a recognized authority on equipment used exclusively in surgery, such as major operating tables, thoracic tables.

Among his work in the medical field is the Albee-Comper orthopedic table, and Mac Eachern obstetric table.

New Divisional Manager For Ethicon Division

James A. Cormack has been appointed divisional manager of the newly created Great Lakes sales division, Ethicon, Inc.

The new division, which began operation recently, will have headquarters in Cleveland, and will include western New York state, the state of Ohio, and parts of Kentucky, Tennessee, and Michigan.

Mr. Cormack last served as Ethicon's sales training coordinator at the New Brunswick, N. J., home office.

Parke, Davis & Co. Obtains Ad Award

Saturday Review recently presented Parke, Davis & Co. an award for "distinguished advertising in the public interest".

Particularly singled out was the series on high blood pressure.

Chalk up another one for Slippery Sam, the high-gloss, high-slip floor wax.

Some administrators still believe that all floor polishes *have* to be slippery. That's why their bosses are paying top insurance premiums and worrying about liability suits...besides spending too much money for floor maintenance.

You're safe when you have LEGGE to stand on

LEGGE Polishes give floors a lustrous finish with in-built Safety. Their co-efficients of friction go as high as *75%* beyond U.L. requirements for slip-resistance. And the Safety *lasts*. Heavy traffic won't "walk-it-off". Many buildings report reductions of *98%* and *more* in slip-accidents.

Here's a big dollars-and-cents saving: Tests show LEGGE Polishes stay on the floor up to *8* times as long as ordinary polishes. That means the big job of stripping and repolishing is rarely necessary. One famous institution lopped $19,000 off its annual upkeep budget with LEGGE maintenance.

No wonder more and more hospitals, schools, industrial and commercial buildings are turning to LEGGE.

We'll gladly demonstrate the effectiveness of LEGGE Polishes on *your* floors. No obligation. Clip the coupon today and see for yourself.

YOU'RE SAFE WHEN YOU HAVE LEGGE TO STAND ON
LEGGE SYSTEM of Safety Floor Maintenance

Walter G. Legge Company, Inc.
Dept. HT-9, 101 Park Ave., New York 17
Branch offices in principal cities.
In Toronto—J. W. Turner Co.

☐ O.K., show me. Have a LEGGE Safety Engineer phone for an appointment. No obligation to me.

☐ Send me your Free Floor Safety booklet: "Mr. Higby and the Gremlin".

Name_____
Firm_____
Street_____
City_____ Zone____ State____

No Stoppage... No Slowdown...

FENWAL RECIPIENT SETS

for Disposable Blood Bottles

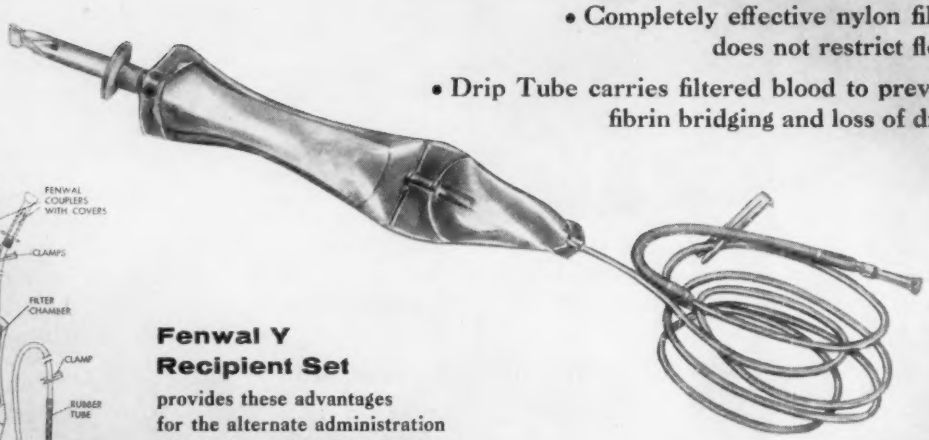
Fenwal

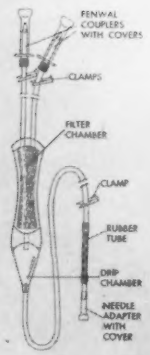
These disposable, two chamber recipient sets reduce costs three ways—through fewer changes during single infusions of whole blood—through repeated use during multiple infusions—through the elimination of pre-filtering.

Compare these unique Fenwal advantages

No air entrainment even when switching from bottle to bottle.

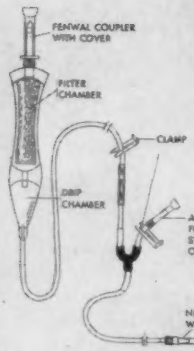
- Sealed construction designed for pressure infusion.
- Completely effective nylon filter does not restrict flow.
- Drip Tube carries filtered blood to prevent fibrin bridging and loss of drip.





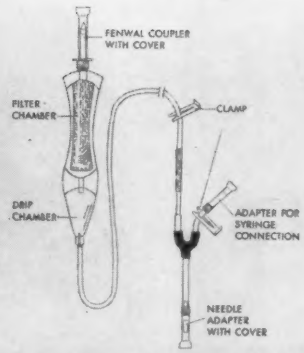
Fenwal Y Recipient Set

provides these advantages for the alternate administration of solution and blood through a single set.



Fenwal Anesthesia Set

provides connection for barbiturate administration while maintaining parenteral fluid or blood infusion.



Fenwal Pressure Metering Set

offers a convenient syringe connection for pediatric infusion.

Write today for descriptive information and price list.

FENWAL LABORATORIES, INC.

47 Mellen Street • Framingham, Massachusetts

REVIEW OF HOSPITAL

LAW SUITS

By Leo Parker, Attorney at Law

- County Hospital Construction
- Negligence of Hospital Personnel
- Contract for Installment Payment

● Sometime ago I received a letter inquiring: "Do you know of any plan under which a county can construct or have a hospital without violating a state law which limits the annual expenditures of the county?"

A few weeks ago, a higher court answered this legal question in detail.

In Warren County Fiscal Court v. Warren County Tuberculosis Sanitorium Corp., 272 S. W. (2d) 331, it was shown that a state law provides that no county shall become indebted to an amount exceeding, in any way, the income for such year, without the assent of two-thirds of the voters.

A county board had decided that a new hospital should be built at an estimated cost of $150,000. A contract had been entered into with the Warren County Tuberculosis Sanitorium Corp. By the terms of the contract the corporation agreed to buy a suitable tract for the hospital site; to build the hospital and then lease it to the board for a period of one year for the sum of $75,000, the amount the board had on hand.

The board also had the option to renew the lease from year to year at an annual rental of $15,000 until the rental payments equalled the cost expended on the project by the corporation. The corporation then was required under the contract to convey the property to the board. The contract further provided that the board was not obligated to expend for rentals, or otherwise, any sum in excess of the funds on hand and the annual income for any single fiscal year.

In subsequent litigation the higher court held that by this plan the county could have the hospital without violating the above-mentioned expenditure or debt limitation statute. This court said:

"The proposal involved here constitutes a lease for one year only, with an option in the board to renew the lease from year to year. The board is not legally obligated at any one time to pay more than one year's rent on the property. The option in the board to renew the lease does not amount to an indebtedness or liability."

For comparison, see Booth v. City of Owensboro, 274 Ky. 325, in which the city agreed to convey hospital property to a nonprofit hospital corporation which was to construct an additional hospital building from the proceeds derived from the sale of revenue bonds. The city and county jointly were to lease the property for one year, with exclusive option to renew the lease at a stipulated rental from year to year for 19 years. The nonprofit hospital corporation then was obligated to convey the property either to the city or to the county, or jointly to them at their election.

The court held the proposal outlined did not create an indebtedness in excess of the constitutional limit, even though the rentals were to be applied to amortize the bonds and the city and county had the option to obtain title to the property when the bonds were amortized.

THE LAW OF RES IPSA LOQUITUR

Considerable discussion has arisen from time to time over the questions: What is the legal meaning of the term, "res ipsa loquitur"?

It means that when a person, or patient, or guest in a hospital is injured he can recover damages from the hospital without proving that the injury resulted from negligence of hospital officials or employees.

In Foster v. Community Hospital, 277 Pac. (2d) 408, the testimony showed the following facts: A woman named Foster entered the Community Hospital at the request of her personal physician because of an infected toe. Upon her doctor's orders one of the nurses employed by the hospital applied hot compresses to Foster's leg, over which was placed an electric heating pad. Foster's left leg was then extended out over the edge of the bed in an elevated position. When the packing was removed, approximately 48 hours later, it was discovered that Foster had sustained a second-degree burn on her leg. The burn healed slowly, and she received medication therefore for many months.

Foster sued the hospital for damages, alleging that the doctrine of res ipsa loquitur is applicable, thus making the hospital liable in damages to her without any proof on her part that the injuries were caused by negligence of the hospital's employees. The higher court agreed with these contentions and, in holding Foster entitled to recover damages from the hospital, said:

"The heating pad was under the sole control of the respondent (hospital) and appellant (Foster) was entitled to the benefit of an inference of negligence arising from the happening of this unusual accident, because respondent (hospital) was in a far better position to know what caused the instrument to be dangerous. We therefore conclude that the doctrine of res ipsa loquitur was applicable to the facts of this case."

This court went on to explain that when the specific cause of the accident is known, the doctrine of res ipsa loquitur does not apply. However in this case it may have been that the heating pad was defective or improperly adjusted, or that the compresses had been dipped in some harmful solution, or that the temperature was excessive. These and other possible causes were within the peculiar knowledge of the hospital employees, and heating pads are now of such general use that one may take notice of the fact that their use is not dangerous when ordinary care is exercised. Therefore, the court presumed that Foster's injuries resulted from negligence of the hospital employees.

(Continued on next page)

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EQUIPMENT

Stainless Steel
Dressing Cart
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SPECIFIED MORE AND MORE!

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- *Quality Construction*
- *Durability*
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These and many other features are combined to make **WILSON** today's outstanding buy in stainless and aluminum hospital furniture.

Our Equipment Is Distributed Exclusively Through Reputable Dealers.

Anesthetist Stools
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Instrument Tables
Irrigator Stands with Percolator
Irrigator Stands
Linen Hampers
Mayo Stands
Nurses Work Tables
Observation Stands
Operating Stools
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Special designs built to your specifications

WILSON Stainless Steel and Welded Aluminum Alloy Equipment
MANUFACTURING CO. ★ COLUMBUS, GEORGIA

The name **WILSON** means—the highest quality materials and the most modern manufacturing methods have been used . . . and on all operating room equipment, the finest type casters—ball bearing, soft rubber, noiseless, electrically conductive.

MUST FOLLOW CONTRACT

Recently a higher court rendered an important decision involving installment payment, about which all hospital officials should know. This court held that if hospital officials agree to take monthly payments from a patient who cannot pay cash, the hospital cannot subsequently demand any different kind of payment.

In Douglas County Memorial Hospital v. Newby, 278 Pac. (2d) 330, the testimony showed that Mr. Newby was employed as a farm hand when his wife was first admitted to the Douglas County Memorial Hospital and when she was discharged the last time. The husband testified that when his wife first entered the hospital he told the head nurse that they were unable to pay for the hospitalization. When she was discharged from the hospital they were unable to pay the account. At that time he made a verbal agreement with the head nurse to pay $20 per month on the hospital bill owed at that time.

Later the head nurse told the husband that the board of trustees desired a signed agreement. Mr. Newby signed a written contract to pay the hospital $20 per month until the hospital bill was fully paid. At this time the balance amounted to $715.86, so that it must have been contemplated that Newby would have three full years in which to pay off the account at the rate of $20 per month.

After the husband had made monthly payments amounting to $230, the trustees of the hospital demanded that Newby sign a promissory note to secure the payment of the balance due. Newby refused to sign the note, and the hospital then filed suit against him and attached his automobile. Newby then sued the hospital and asked the court to compel it to return his automobile and accept the agreed $20 monthly payments until his debt was fully paid.

During the trial the head nurse testified that the policy of the hospital was to accept any patient who needed hospitalization, regardless of his ability to pay for such service. Generally speaking, patients who could not pay their bills signed notes for the amount due and payable to the hospital.

The lower court held in favor of the hospital, but the higher court held that since the hospital and Newby signed this written contract, the hospital must accept the agreed $20 monthly payments and that it could not later compel Newby to sign a note or attach Newby's automobile. The court said:

"Opinion may differ as to whether a three-year-old Ford is a luxury or a necessity for a farm hand living with a wife and four children on a farm three miles from the nearest town. But that is a matter for the farm hand to decide, and not the courts. This would still be true if the husband had bought a Cadillac or a helicopter. Whether such a person is improvident in so doing when he has outstanding financial obligations, is a moral issue and not a legal one. Furthermore, respondent (hospital) having accepted from appellant (Newby) the payments called for in the written contract for almost a third of the period contemplated by the parties, is in no position to urge that there was no consideration for the contract. For the reasons heretofore stated, the judgment is hereby reversed, with instructions to dismiss the action and dissolve the attachment."

Whether the hospital is liable in damages to Newby for attaching his automobile and depriving him of its use may be decided in a later litigation.

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927. Cover-glass dispenser
928. Central tray conveyor
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935. Denture container
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938. Variable speed rotator
939. Monaghan valve
940. Explosion proof vacuum
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943. Prothrombin clotting timer
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945. Boned chicken
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947. Acetate holders
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953. Oxygen folder
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30 West Washington Street
Chicago 2, Ill.

Send more information on items circled. SEPTEMBER, 1955

910.	916.	922.	928.	934.	940.	946.	953.
911.	917.	923.	929.	935.	941.	947.	954.
912.	918.	924.	930.	936.	942.	948.	955.
913.	919.	925.	931.	937.	943.	950.	956.
914.	920.	926.	932.	938.	944.	951.	
915.	921.	927.	933.	939.	945.	952.	

Other information .....

Name ..... Position .....
(Please Print)

Hospital .....

Address .....

City ..... Zone ..... State .....

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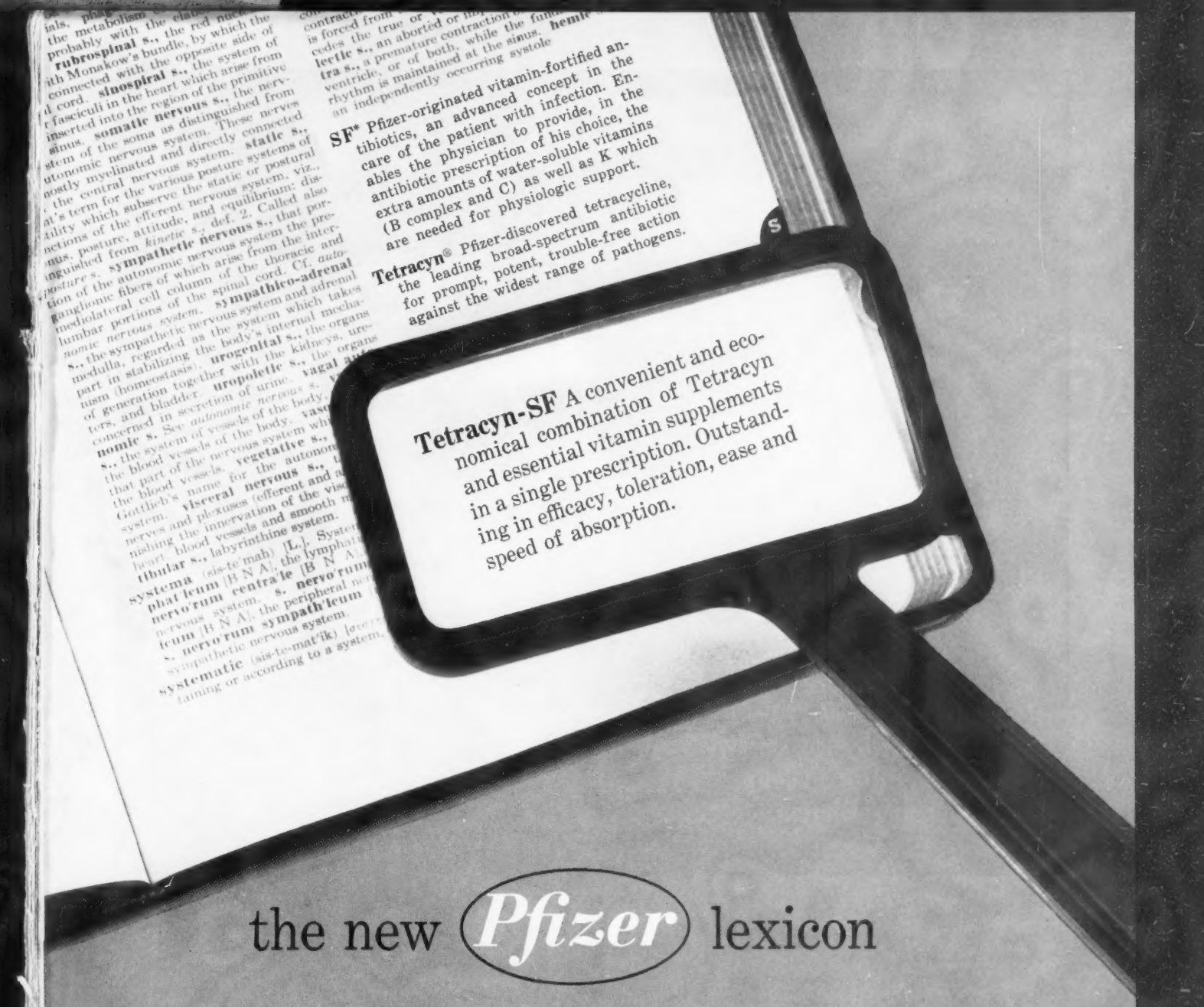
SF* Pfizer-originated vitamin-fortified antibiotics, an advanced concept in the care of the patient with infection. Enables the physician to provide, in the antibiotic prescription of his choice, the extra amounts of water-soluble vitamins (B complex and C) as well as K which are needed for physiologic support.
Tetracyn® Pfizer-discovered tetracycline, the leading broad-spectrum antibiotic for prompt, potent, trouble-free action against the widest range of pathogens.
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Products of Pfizer research and development, SF formulations are available as:

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GOES TWICE AS FAR!

½ oz.—instead of the usual one oz.—to the gallon! One 5 lb. can makes 160 gallons of cleaning solution.

Hospitals all over are switching to the Weck Cleaner. It costs less and goes at least twice as far. For example, a pinch of Cleaner is all that is required in a needle-and-syringe washer.

For **CLEANER CLEANING** of Surgical Instruments, Laboratory Glassware, Rubber Equipment

- **Removes clotted blood and other contamination rapidly.**
- **Cleans effectively even in the hardest water.**
- **Wets, penetrates, dislodges and emulsifies all soils rapidly.**
- **Dissolves rapidly in warm water.**
- **Does not produce foam which would interfere with mechanical washing.**
- **Inhibits corrosion of surgical instruments.**
- **Completely safe to use. Does not contain free caustic. No more alkaline than a neutral soap.**
- **Costs less than 3¢ a gallon.**

If you ask me—
any product that will clean thermometers and formula bottles and nipples will clean anything. And, in my opinion, the best job is done by the new WECK CLEANER.

PRICES PER 5 LB. CAN WITH MEASURING SPOON:

1 can	$5.30
3 cans	5.00 each
6 cans	4.80 each
12 cans	4.60 each

FREE SAMPLE!
Simply mail a postcard marked "Free Sample of Weck Cleaner" with your name and address. With the generous sample you will receive complete instructions on the most effective way — the WECK way — to clean surgical instruments, catheters, syringes, rubber gloves, tubing, laboratory glassware, etc.

EDWARD WECK & CO., INC.
65 YEARS OF KNOWING HOW
135 JOHNSON STREET • BROOKLYN 1, N. Y.
Manufacturers of Surgical Instruments • Hospital Supplies • Instrument Repairing

(Continued from page 7)

AMA Drug Evaluation Program Outlined

Timely information on the usefulness and safety of new drugs will be given through a new program announced recently by the Council on Pharmacy and Chemistry, AMA.

This is the first in a series by AMA councils on programs inaugurated to replace "seal-acceptance" activities.

The council will examine available published and unpublished evidence relating to actions, uses, dosages, hazards, and other properties of drugs.

Child's Stomach Trouble Could Be Emotional

Stomach ulcers and other internal disorders caused by emotional factors are found in children just as well as adults, according to two staff members of the Children's Mercy Hospital, Kansas City, Mo.

The bottled up emotions may crop out as real physical illnesses such as peptic ulcer, ulcerative colitis and a variety of other ailments.

Many of these illnesses begin because children and infants fail to receive sufficient love, or are surrounded by an atmosphere of irritability, impatience, and anger.

Once the doctor recognizes the emotional basis of these illnesses, he can attempt to guide the parents in their approach to the child's problem.

Research in Renewing Decayed Teeth

The United States Air Research and Development Command has presented a one-year grant of $22,900 to the Jewish Hospital of Brooklyn to continue its pioneer research work in the practical method of renewing decayed or missing portions of teeth.

It is hoped that a decayed tooth may be plugged with the spongy, demineralized matter from another tooth. Then the body fluids will regrow the inorganic crystals, leaving a perfectly hard, regrown tooth.

This research project is under the direction of Albert E. Sobel, M.D., chief, hospital's bio-chemistry department.

WANTED: Instructor of Nursing Arts, with degree in Nursing Education and experience in teaching, for an accredited school of nursing, 70 students, 3 year program with college affiliation. General hospital, 236 beds, plus 60 bassinets; new wing addition to start soon. Pleasant working conditions, liberal personnel policies. Salary dependent upon qualifications. Write Director of Nursing, San Jose Hospital, San Jose, California.

Dieting can Result In Childlessness

Malnutrition is one of the principal causes of infertility among young women today, according to John Dale Owens, M.D., St. Mary's Hospital, Milwaukee.

Motherhood is not easily achieved without adequate vital food elements, according to Dr. Owens. A sweet roll and a cup of black coffee plus a sandwich, soft drink, and popcorn for lunch just isn't adequate for young women.

Deprived of proper nutrition, a hormone imbalance may occur which suppresses the pituitary gland, which in turn triggers fundamental child bearing influences.

Cancer Drug Acts As Knife

A new drug that works like a knife, cutting away only the sex chemicals from human and animal adrenal glands, is now being used experimentally on a few patients having cancers that feed on sex hormones, said Bernard Zimmerman, M.D., University of Minnesota cancer co-ordinator.

HYLAND
NORMAL HUMAN SERUM
ALBUMIN-5%
IN SALINE
250 cc.
NEW
IDEAL SHOCK UNIT
Pre- and post-surgery, burns, hemorrhage, infection, trauma
CONTAINS NEEDED LIQUID
for full osmotic effect
A NATURAL, NORMAL PLASMA VOLUME EXPANDER
(not a synthetic substitute)
NO HEPATITIS RISK
heated at 60°C for 10 hours
READY FOR IMMEDIATE USE
no grouping or typing — no reconstitution
5 YEAR DATING
Normal Serum Albumin (Human) 5% Solution in Saline – 250 cc. with administration set
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THE LAB

Bacilli Preserved in Aluminum Foil

Above: First a wooden mold is made with nine round depressions cut into it, each about four-fifths of an inch across and a fifth of an inch deep. Bacteriologist then washes hands and presses a piece of aluminum foil over the mold and into the depressions. The pressed foil is placed in a petri dish, sterilized, and dried with heat.

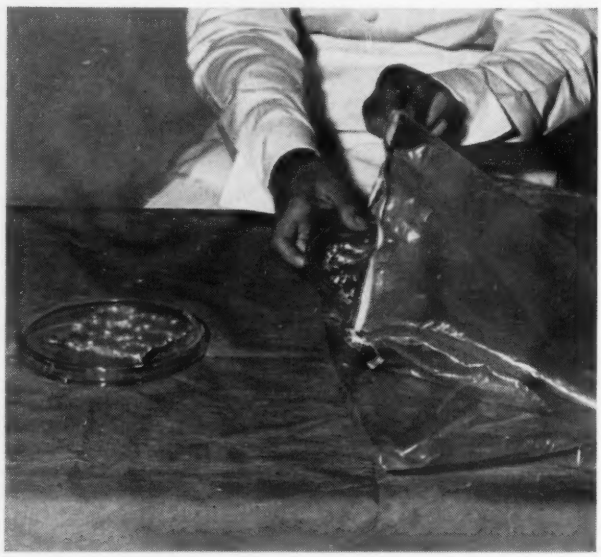
• A simple, inexpensive way of preserving tubercle bacilli cultures for routine drug susceptibility tests has been devised by a VA hospital bacteriologist.

Instead of separate large glass tubes for each test, kitchen aluminum foil is used. The cost is only two-tenths of a cent per test.

Advantages of the method, according to William E. Dye, formerly research bacteriologist at the Oteen, N. C. VA Hospital, and his co-worker, Mrs. Dorsie B. Ford, are: (1) It's cheaper; (2) it saves time in handling; (3) supplies are easily obtained; (4) it saves storage space in the laboratory, and (5) the foil can be discarded when the tests have been finished.

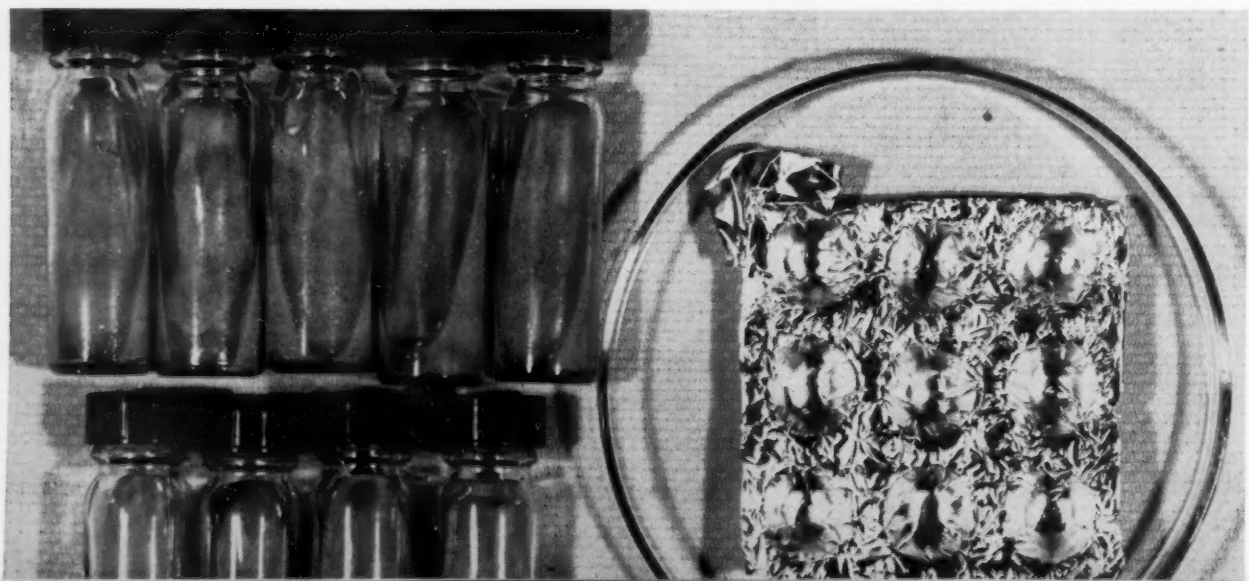
Mr. Dye says he won't be satisfied until he finds something to replace the glass petri dishes in which the cultures are kept.

Steps in the method are shown in the accompanying pictures.



Above: The culture is placed into the depressions, a petri dish cover is placed over the foil, and the whole thing is turned upside down and slipped into a plastic bag (to retain the moisture), and the culture is ready for its "incubator," where the bacilli develop and react. When the tests are finished, petri dish and bags are saved—foil is discarded.

Below: Graphic evidence of the saving effected in storage space is shown here: At left are nine cultures kept in glass tubes; at right are nine cultures in foil-covered molds.



Hospital Purchasing Workshop Out West

The second workshop on hospital purchasing sponsored by the Association of Western Hospitals will be held in the Multnomah Hotel, Portland, Ore. October 31 to November 1.

The purpose is to educate and train hospital executives and personnel. Subjects to be discussed will include: legal phases of purchasing, purchasing department records and a look at departmental relationships.

American Dietetic Association Will Meet in St. Louis

October 18 through the 21st have been set for the annual meeting of the American Dietetic Association.

Speakers at this meeting will include: Cloyd S. Steinmetz, Ph.D., president, American Society of Training Directors speaking on Supervisory Technics. Also Verne J. Kallejian, Ph.D. director of education, AHA.

Supply of Natural Rubber Adequate

Despite the fact that world consumption of natural rubber has exceeded production facilities in the Far East there is enough natural rubber in sight to cover anything but a full-fledged wave of scare buying, according to J. H. Gibson, president, Pioneer Rubber Co.

Atomic Medicine For Heart Disease

Atomic medicine is providing faster and more accurate measurement of heart action, which is so important in diagnosis and treatment of heart diseases.

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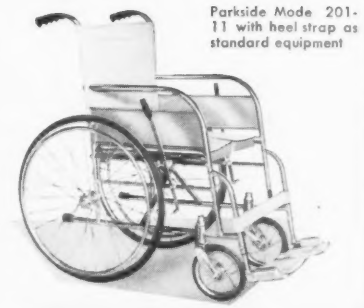

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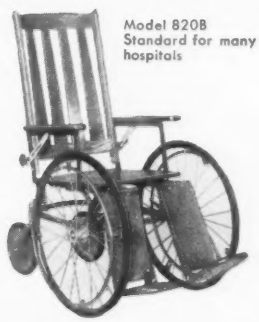

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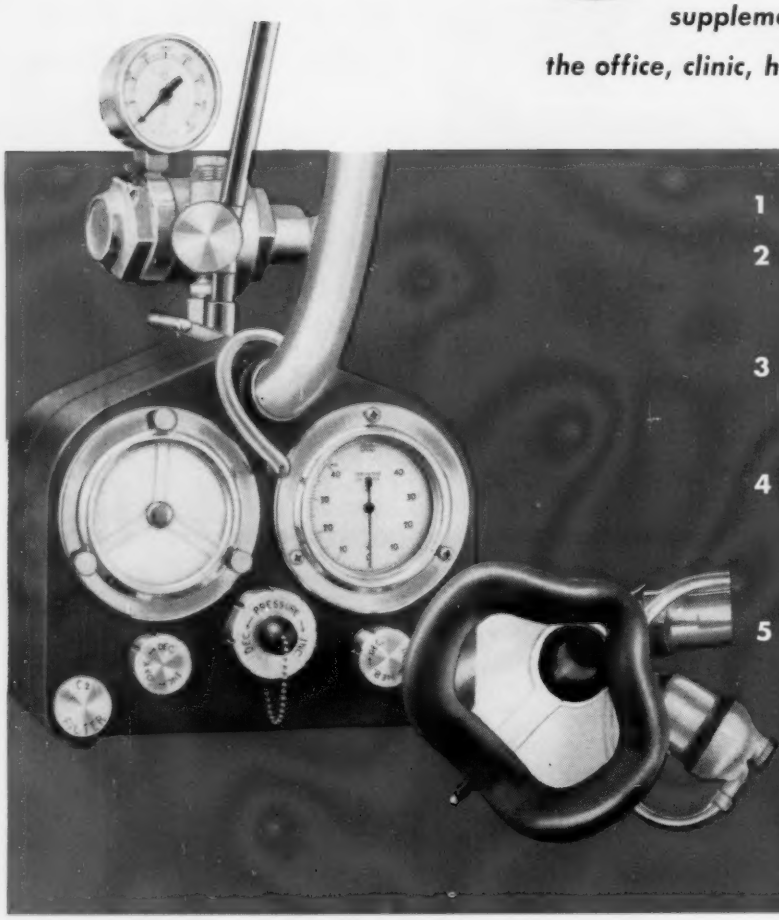

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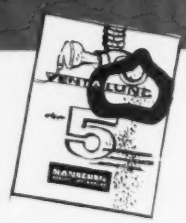

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Award of Merit Goes to Joseph Norby

Joseph G. Norby, hospital consultant, Milwaukee County United Hospital Fund, has been chosen as the 1955 recipient of the American Hospital Association's honor award—the Award of Merit.

This award will be presented to Mr. Norby September 21 at the annual banquet, AHA convention, Atlantic City, N. J.

Medical and Hospital Care Research Projects

Two research projects to document the progress of medical and hospital care have been announced by the Health Information Foundation.

One project—known as "Fifty Years of Progress in Medical Care" will result in statistics on mortality and morbidity with special reference to change in population, levels of living, and increased productivity. This two-year study will also trace the availability and distribution of the nation's health services during the past half-century. It will be supervised by Odin W. Anderson, Ph.D., the foundation's research director.

The other project will be conducted at Beth Israel Hospital, Boston, under the direction of Cecil Sheps, M.D., executive director. It will be a detailed analysis of patients treated in that hospital in 1932 compared with the hospital's population in 1952.

American Osteopathic Hospital Association Convention

The American Osteopathic Hospital Association will install its first woman president at its twenty-first annual convention this fall.

She is Mrs. Alixe P. Nuzum, administrator, Des Moines (Ia.) General Hospital.

During the October 29 to November 3 meeting in Washington, D.C., many subjects pertinent to hospital administrators will be discussed.

Hospital With "Pig Motel"

North Carolina State Hospital, Morgantown has a system to produce its own pork. They call it the "pig motel". Under the system, weanlings are put in the first of a series of 10 feeding pens. They are then moved gradually through the numbered units until ready for slaughter—about three to four months later.

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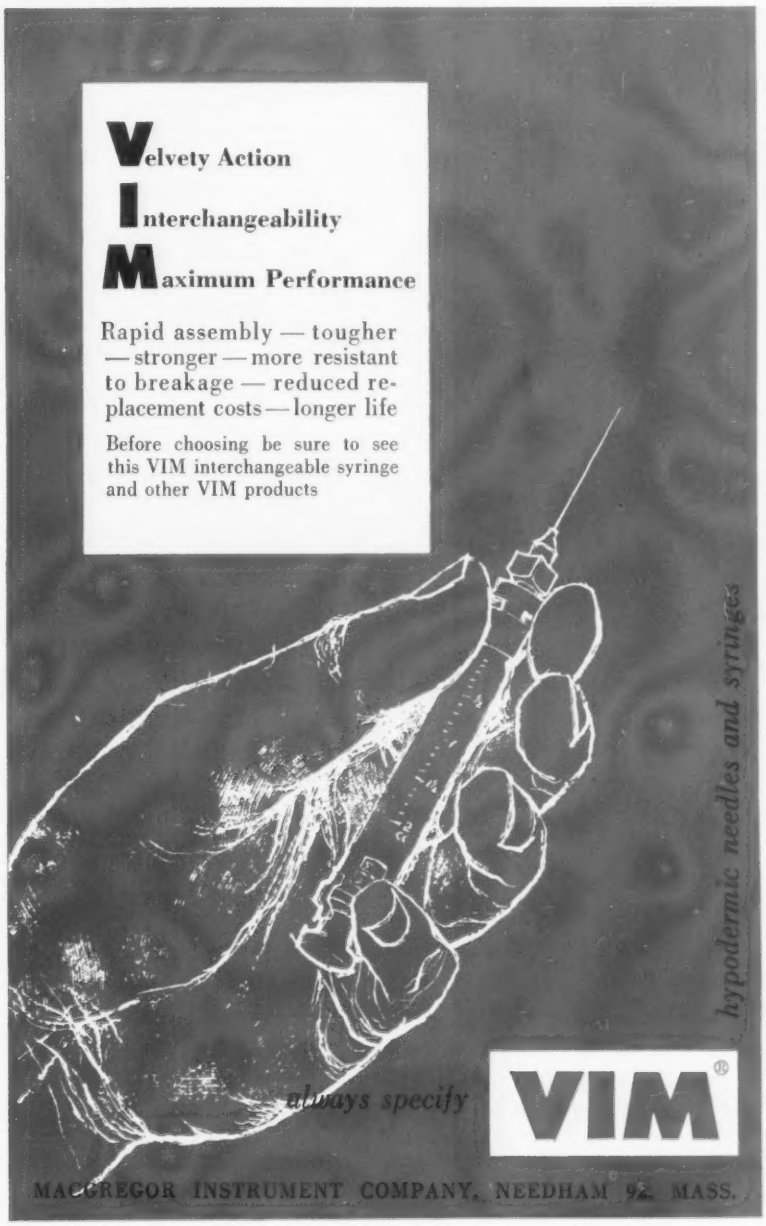
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Some of the members of the new group are (standing, rear row, l. to r.): Miss McEvilly; Mrs. E. Kerney, in charge of membership; Mrs. Gladys Bray, president. (Seated, front row, l. to r.): Miss M. Webber; Mrs. D. Brunner, treasurer; Mrs. M. Anderson; Miss K. Seitz; Mrs. S. Silkey, and Mrs. V. Flowers. Officers not shown are Mrs. Juanita Wallace, vice-president, and Mrs. Ruth Leeds, secretary.

Evansville Area Nurses Join A.O.R.N.

• One of the first meetings of the newly organized Evansville (Ind.) Area Association of Operating Room Nurses was held recently at the Gibson General Hospital, Princeton, Ind. Operating Room nursing personnel from 14 hospitals in the area comprise the membership.

For the first part of the sterilization panel presented at the Second Annual Conference, Association of Operating Room Nurses, St. Louis, January 24-27, 1955, see Central Supply Section, page 85.

Preoperative Skin Preparation*

Carl W. Walter, M.D.**

Dr. Walter

• Disinfection of the skin is a perennial problem in most hospitals. It assumes monumental proportions largely because we fail to recognize the actual problem which is to destroy pathogenic bacteria which are facultative for humans. Facultative organisms are ones which have grown and caused disease in humans, and hence establish themselves very easily on other humans.

The bacteria which are found in the kitchen at home, in the ordinary workshop, and other familiar surroundings, are not dangerous to health except under rare circumstances when they are implanted with a foreign body to enable them to get a start. Ordinary skin bacteria are not dangerous.

There are occupations in which humans encounter dangerous organisms frequently. These are well known and described in the surgical literature as definite industrial hazards. The skin lesions from fish-cutters, in which bacteria from fish are implanted into the skin, and the abattoir lesion, found on the hands of people who handle cattle, are examples of occupational lesions in which facultative organisms are implanted on human skin. An organism which was very widely spread in machine shops is the ordinary *Staphylococcus albus*, which grows in cutting oil, used to cool the tools on lathes, drills and presses. When it becomes embedded with bits of metal in workers' hands, it causes a great deal of difficulty.

In the specific hospital, these various areas present no great problem. The problem is to take care of a kind of skin which is more dangerous than any which I have discussed, because that skin contacts human disease daily, picks up pathogenic organisms which are actively producing disease in humans, and carries those organisms from one patient to another. These bacteria are becoming increasingly important in the daily care of patients because they survive the onslaught of all our chemotherapeutic and antibiotic agents. They are resistant to modern miracle drugs, and when they are implanted in a wound we have an epidemic which represents somewhat the epidemics described by Lister in the days before antisepsis. Because hospitals are becoming infested with this type of antibiotic and chemotherapeutic-resistant organisms, we have an ever-increasing problem in controlling sepsis in the operating room.

A recent report by Howe from the Massachusetts Memorial Hospital[1] showed an increasing incidence of postoperative sepsis at an annual increment of 1.2 percent, every one of the causative organisms being antibiotic-resistant, every one being *Pseudomonas* or *Staphylococcus albus*. Landy et al, of the University of Chicago, at the American College of Surgeons' congress last October described an aureomycin-resistant *Staphylococcus albus* in the nose and throat of a surgeon, undergoing treatment with aureomycin.

Once you recognize that this is the kind of organism you should think about when you discuss disinfection of the skin, it becomes obvious that it is not the disinfection of the patient's skin, it is the disinfection of the doctor's skin, the nurse's skin, the orderly's skin that is important. The patient who has been hospitalized for many weeks or months presents a similar problem. The one who comes from home on Thursday afternoon to be operated on Friday morning does not have an overwhelming bacteriologic problem. The chances are that you can operate on him following simple washing of the skin and have no difficulty whatsoever.

With this orientation on the kind of bacteriology we're discussing, I would like to describe the various problems in skin disinfection with which we must be familiar.

There is an anatomic problem because skin is a com-

*Address presented at Second National Conference, Association of Operating Room Nurses, St. Louis, January 24-27, 1955.

**Associated Clinical Professor of Surgery, Harvard Medical School; Surgeon, Peter Bent Brigham Hospital.

[1] Howe, Chester W., "Postoperative Wound Infections Due to *Staphylococcus Aureus*," New England Journal of Medicine, Vol. 251, No. 11, September 9, 1954.

plicated structure. There are plain gross differences in skin, the thick squamous epithelium of the sole of the foot, the palm of the hand, the dorsum of the back, or the very thin epithelium of the abdomen, the protected epithelium of the axillary fold, the inframammary fold, the groin, the scrotum—each of these areas has an anatomic structure which differs. It is exposed to a certain amount of friction, or it is protected from friction, and hence the bacteria which we find differ not only in numbers but in kind. It is very difficult to find bacteria in the skin over the olecranon process because we rub off the desquamating epithelium, and with it go all of the bacteria.

On the other hand, in the inguinal region or the perineum, the axilla, the inframammary fold, where desquamating epithelium does not get rubbed off by clothing and other types of friction, you can generally find many more organisms, because they grow in the accumulated layers of desquamating epithelium.

Skin grows from ordinary cuboidal cells which, as they mature, are pushed toward the surface. As they move away from the vasal layers, the vital protoplasm tends to concentrate and dry up. Gradually the nuclei disappear, and what was a cuboidal cell finally becomes a very flat squamous cell, and the protoplasm keratinizes or cornifies and it becomes typical skin.

If you scrub off the desquamating epithelium, you get down to the layer where blisters form. If you puncture a blister, you find the raw, bleeding, fresh weeping base, which represents the living cells that produce the epidermis. Everything superficial to that is in the process of dying and being desquamated.

It is in the desquamating cells where most of the bacteria we discuss exist, and hence they can be rubbed or scrubbed or blistered off, if you like. This is mechanical removal of these organisms. During the ordinary course of events, bacteria grow down into the newly formed layers of cells at about the same rate that the newly formed cells are growing toward the periphery and are casting off the dry cornified epithelium. In protected areas like the scalp, we are used to seeing this. The flakes of desquamated epithelium are called "dandruff." You can culture the organisms that are growing in the scalp in these flakes of epithelium.

This normal process of growth occurs not only on the surface of the skin but also in the ducts of the skin glands and in the hair follicles. Each anatomic area of the skin has its characteristic representation of glands of one kind or another. The bacteria are busily growing into the ducts through the secretion and the desquamating duct cells at about the same rate that new cells in the duct are pushing out and sweeping the bacteria toward the surface. The skin, therefore, disinfects itself by this mechanical purge toward the surface.

This steady state is maintained fairly well except when trauma drives the bacteria deep to the surface cells, or when we have overwhelming disease like a respiratory infection, in which the ordinary immunologic processes are overcome and the skin finds itself defenseless in keeping bacteria under control. Then the normal flora, plus those which we put on the skin by handling handkerchiefs or sneezing, grow wildly. In a person with respiratory disease, the same secondary invaders which characterize the bacteriology of the nasopharynx can be identified in overwhelming numbers in the desquamating epithelium of the hands or any exposed skin of the body. These bacteria are dangerous because they are causing disease in a person

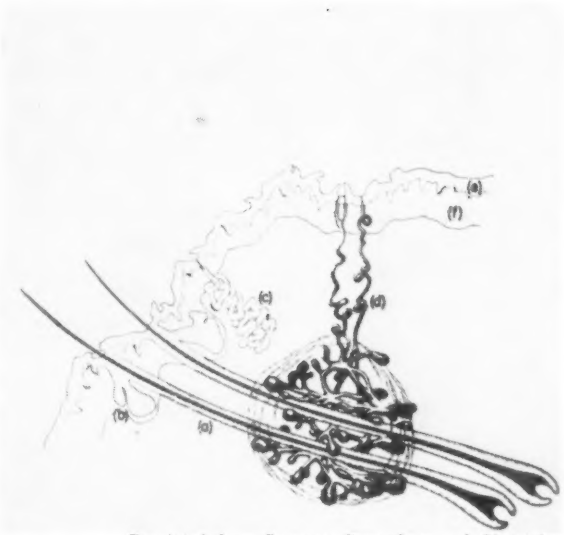

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Figure 1

Schematic presentation of an apocrine gland as constructed from the composite outline of 110 serial microscopic sections cut at approximately 7 micron intervals: (a) hair follicle; (b) sebaceous gland (holocrine); (c) sudoriparous gland (eccrine); (d) apocrine gland; (e) epidermis; (f) dermis. Apocrine gland X 11. Sudoriparous gland X 11 (after Huber). Sebaceous gland X 11.

(the host), and anything that he touches can implant these organisms into wounds, to other people, and hence convey disease.

Figure I shows a schematic section of skin. The area between the first pair of the lines at the right (e) represents the desquamating epithelium. You see that it has a very complicated surface with many nooks and crannies, and many hills and valleys. It is quite natural to suppose that on the tips of the hills the bacteria gets rubbed off, and in the valleys they tend to build up. The broader band deep to the epidermis is the corium (f), where you have the prickle cells and the skin is busy replacing itself.

Here are a number of skin structures. The big long telephone poles represent hairs (a); a sebaceous gland (b) furnishes the sebum to keep hair flexible and greasy; (c) is a sudoriferous gland, which gives characteristic odor and helps us to perspire; (d) is a more complicated gland.

Bacteria grow in these glands, as is shown in Figure II. This is a section of skin which has been incubated so that the individual organisms could grow out to form clumps big enough to show when stained. Here you see a sebaceous gland and its typical acini. Here its duct begins and goes out toward the surface of the skin, and you see the masses of bacteria growing in the duct. Notice that they are more plentiful toward the periphery than deep in the gland.

At the top, that black material which looks like a shingle roof is desquamating epithelium. At half past one you can see the individual cell outlines of the keratinizing cells. The black layers are masses of bacteria growing in the desquamating epithelial cells.

The surface cells and bacteria can be rubbed or scrubbed off very easily. They reflect the daily contacts and soil on the skin. These bacteria are termed the "transient organisms."

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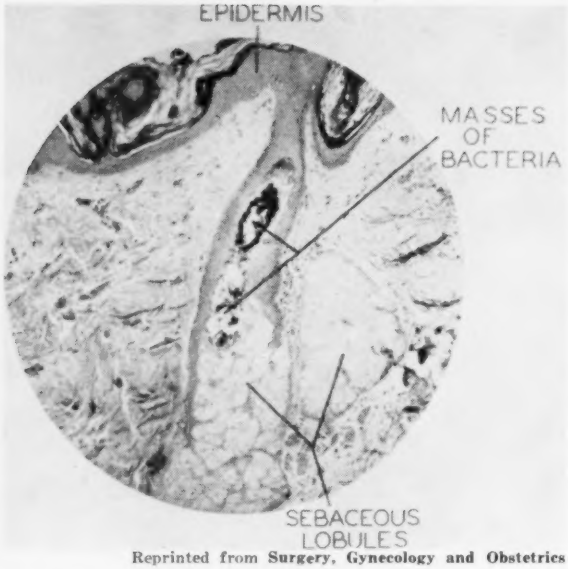

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Figure II

Photomicrograph showing a section of skin removed from the female breast and incubated for six hours. The surface of the skin was cleaned with iodine and alcohol before removal, and the section was stained to show the bacteria. Large masses of bacteria are shown extending deep into the sebaceous gland and far below the skin surface.

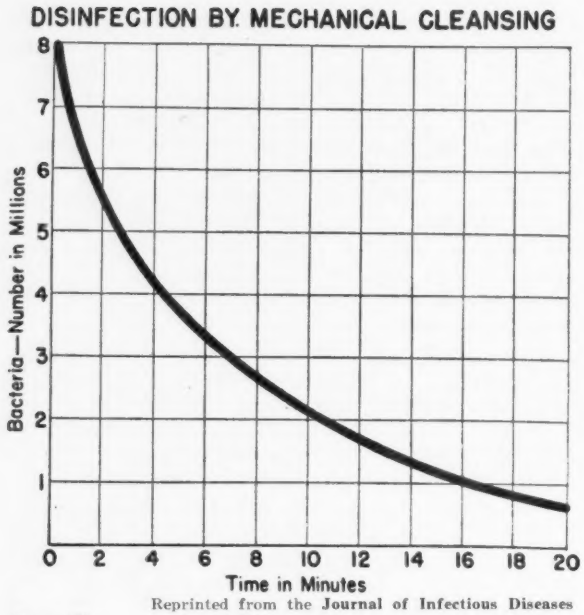

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Figure III

SKIN PREPARATION continued

The organisms which grow deeper into the epithelial cells and in the ducts are the normal saprophytic inhabitants of the skin. They represent the residents, and they are impossible to scrub off. When you put a pair of rubber gloves on over disinfected skin and then begin to perspire, these organisms are purged from the glands and load the sweat inside a sterile rubber glove with many organisms. It's just like injecting the glove with millions of gland loads of organisms. This is one way in which the resident organisms get out of the skin.

If a facultative organism is implanted while caring for an abscess, scarlet fever, a respiratory disease, or hospital sepsis, it first contaminates the surface, but every once in a while it grows down and becomes established deeper in the skin, and then we have a person who is a carrier for this kind of organism. This carrier state is very difficult to control, and very difficult to eliminate. Philip Price (Figure III) showed, in China, that it took him months to get rid of streptococci from his hands which he had acquired while caring for wounded Japanese soldiers.

This is how the doctor and the nurse play a role in carrying disease from one patient to the next.

You can see that it is important to eliminate layers of desquamating epithelium periodically from the surface of the skin. Otherwise all the valleys fill up with good culture media and masses of organisms. The peaks or the mountains are always clean because friction rubs them clean. This is why you need to brush your skin every day in order to clean out the nooks and crannies, and this is why, in ordinary hospital practice, just washing with a cloth or sponge is ineffective in the control of skin bacteria.

Daily scrubbing does not have to be prolonged because you can remove bacteria mechanically very easily. Figure III, from one of Price's original studies, shows the rate of removal of skin bacteria by simple scrubbing with a nylon brush and distilled water. As you scrub, the number of organisms removed becomes less and less, until after about 20 minutes the curve becomes asymptotic, and you can scrub practically indefinitely and remove the same number of organisms per minute.

What you are doing is massaging organisms out of the glands at about the same rate they are reproducing. When you start with a skin which has not been scrubbed for a couple of weeks, you have the problem at the left of the chart. You scrub bacteria off quite effectively in 10 minutes.

Once the base line is reached, the data on Figure IV pertain. It takes 10 days for the skin flora to re-establish themselves. If you scrub every day, accumulation of desquamating epithelium is prevented. Such a skin can be kept safe by scrubbing with nine strokes of a nylon bristle brush every day, with 15 strokes to the subungual spaces and paronychial folds. This presumes no additional trauma like changing a tire, digging in the garden, patting the dog, and all the things we are wont to do.

If you scrub only every five days or so, you have an entirely different problem, because the bacteria have an opportunity to re-establish themselves, and you have to remove them by more prolonged scrubbing. Experience has shown that it requires about 15 nylon bristle brush strokes, and 25 to the nails, to remove the accumulated cells and bacteria.

If you are an occasional operator (every two weeks or so), you come in with a maximum load of bacteria. You have a maximum problem that requires 30 strokes of a good nylon bristle brush and some 50 strokes to the subungual and paronychial spaces.

This is why everyone who approaches a scrub sink has an individual problem that he must define for himself. He must remember how often he has scrubbed; he must take cognizance of trauma which has embedded dirt in his skin and under his nails. This is why the obstetrician who works every day has no problem at all. This is why the surgeon who works every day has

gotten away with just a lick and a promise, and we all look askance at him. If the occasional operator used the same technic, he would be in difficulty.

The nurse who is taking care of infants in a premature nursery, scrubbing once a day, washing her hands after every contact, really has no great problem. I would like you to bear in mind this definition of the kind of bacteriologic problem which we have at various times and why it differs between individuals, and in each individual's daily experience in the course of a month or a year.

It takes daily scrubbing to keep the desquamating epithelium down and to keep the skin in normal control. What application has this? I think that you can well understand the mechanical side. We have to get a smooth skin; we have to get everything off which we can mechanically.

From the chemical side there are several approaches which can be used. The classic approach has been to use very strong disinfectants to destroy the bacteria on the skin by a single application. Seventy percent ethyl alcohol, 50 percent isopropyl alcohol, two percent aqueous iodine, and any of the quaternary ammonium compounds, represent materials which are single-shot germicides. They destroy all the surface bacteria they contact, but because they precipitate a layer of protein as they penetrate the desquamating epithelium, they automatically form a barrier, so that they do not penetrate to the areas deep in the epidermis where fresh cells are growing and where the bacteria are multiplying. The single-shot germicide exerts a surface effect.

About 15 years ago, experience was gained with a penetrating detergent germicide which has the power of penetrating into the ducts and into the desquamating epithelium along the viable fringe. When it goes into this area it prevents bacteria from multiplying at the viable border of the epithelium.

This bacteriostasis is so effective that as the cells grow, the bacteria which cannot multiply to grow down into them are purged from the skin. This forms the basis of our modern technics for disinfection of hands, and for certain patient problems.

Hexachlorophene is one of the efficient detergent germicides which can be used for this purpose. It works by suppressing bacterial growth rather than by single-shot destruction. To use it ideally, it should be applied every day; the skin should be brushed every day to keep it in good physical shape. A technic must be developed whereby hexachlorophene, either in a synthetic detergent or in a conventional soap, is applied properly and conscientiously to keep the bacteria suppressed.

This does not mean that you cannot use any of the classic single-shot germicides in addition to hexachlorophene. It is perfectly logical and feasible, because there is always residual dirt under the nails, where a powerful single-shot germicide can be expected to penetrate and where we cannot wait for suppression.

A combination of daily suppression plus a single-shot application to destroy the transient organisms in traumatized skin or the dirt under the nails not controlled by biologic suppression is good technic.

Hand care for the surgeon, obstetrician, operating room or delivery room nurse reduces itself to the problem of brushing the hands with nine strokes of a nylon bristle brush every day, using a detergent or soap containing hexachlorophene detergent, or soap. This should be done faithfully. It does no harm to use ordinary soap occasionally. The hexachlorophene is leached out, but the next time you wash with hexachlorophene you put

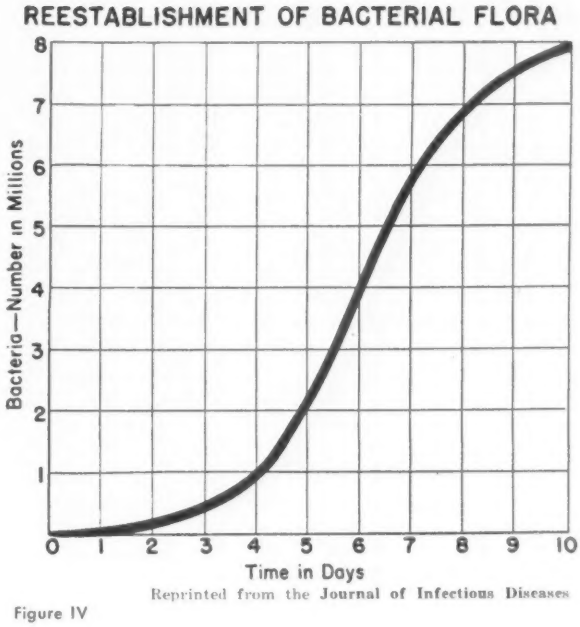

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Figure IV

it back in again. There is no "all or none" rule to this —it's just a question of what the majority of the exposure is.

This is a good technic for nurses throughout the hospital—for instance, those in communicable disease units and in the nursery. The big thing to remember is to use it after every patient contact rather than before, because in this way you wash off, mechanically, the

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Figure V

The comparative disinfecting effect of scrubbing, detergents, and germicides.

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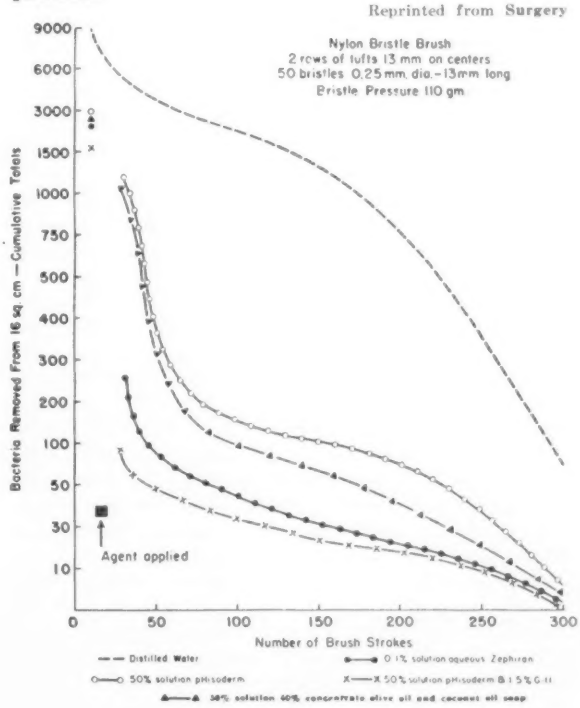

facultative organisms, the dangerous hospital bacteria which you pick up while you care for patients. Your hands are then safe. The bacteria do not have a chance to grow and become saprophytes on your skin, to which you may have no disease response but which may cause trouble in patients.

What do we do actually in surgery? I think you can see in Figure IV that everybody decides what his penance of scrubbing is for the day (Figure V), and this is it! Operating room personnel go through some single-shot detergent, then go into the operating field and do their job. When they come out of that operation, they simply wash their hands, go through another single-shot detergent, and go into the next operation without any great scrubbing or without any great ado.

This is perfectly safe technic which saves a great deal of time and anguish, once you recognize that you're talking about brush strokes on individual skin, and not time on a clock—not a routine which if followed honestly will leave your skin sore and raw and make it so that you really have a big problem with bacteriology, because in a sore, raw skin the inflammatory response in itself encourages the growth of bacteria.

One kind of skin you have to watch in the operating room is that in which dermatitis is provoked either mechanically by scrubbing or chemically by the alkali earth soaps which are deposited when soap is used. Be certain that a person with this kind of skin scrubs the skin every day, so that there is a minimum contact with the brush. Be certain the brushes are not laden with alkali earth soap from previous users. Be certain that he uses one of the synthetic detergents which do not deposit the alkali earth film of insoluble soaps in the skin to provoke contact dermatitis. About five percent of hospital personnel have this problem.

We have discussed the *in vivo* suppression of skin bacteria as it is applied in practice. We had best review the evidence that justifies such use (Figure V). The top line depicts cumulatively the number of bacteria removed by mechanical scrubbing with distilled water, the dotted line is mechanical scrubbing with soap, the dashed line is mechanical scrubbing with one of the synthetic detergents. You notice that these latter are more effective. They help solubilize desquamating epithelium and remove more bacteria mechanically than distilled water alone. They also reduce the friction and make scrubbing more comfortable.

The line of crosses represents scrubbing with an active solution of hexachlorophene. The original count is indicated by the large cross. The active chemical was applied for a minute and a half—10 brush strokes—and you see the enormous degree of suppression, from roughly 2,000 organisms down to a paltry 10 or 15 per square centimeter. This illustrates the striking effect that you can get by using the new synthetic detergents.

What should be done about the skin of the operative site? The technic employed differs with the clinical circumstances and the time available. Consider skin preparation for elective surgery. When you are scheduled to remove a meningioma a week from Friday or when you know you are going to do an osteotomy, or perform an elective laparotomy, the patient should be given a small container with detergent containing hexachlorophene when he is booked for hospitalization. He should be told to scrub the operative site twice a day with an ordinary wash cloth, so that hexachlorophene has a chance to be absorbed into the skin and the bacteria suppressed. When he comes to the hospital, his skin bacteria are under control.

This is done by many surgeons, but once the patient is admitted, the hospital forgets to provide him with the detergent, and while he lies around preoperatively, the bacteria merrily grow again. This treatment must be continued in the hospital as well.

In the hospital, these patients continue their washing regime until they are brought to the operating room. When they are anesthetized, a lather is worked up with the same kind of detergent, and is shaved off. The shaving obviously removes hair, and also much of the desquamating epithelium.

The shave should be done immediately before operation, because it is impossible to shave a skin without cutting off many of the little mountain tops that stick up, and an inflammatory response ensues. Wherever you have inflammation, in three or four hours you have bacteria growing, and when the surgeon makes his incision he is cutting through a mass of living organisms which are growing vigorously in an area of decreased resistance. Hence the shave should be done immediately before the incision is made.

This suppression technic is applicable to most of the skin disinfection problems except for patients who enter for what we might call "unplanned operations."

Unplanned operations, like those for acute cholecystitis or acute appendicitis, present a different problem because there has been no opportunity to suppress skin organisms. Hence we rely on detergency and a single-shot germicide. Here, I think the most effective prep is that of scrubbing the skin with 1:750 aqueous quaternary ammonium compound (a cationic detergent) alternated with 50 percent isopropyl alcohol (an anionic detergent). Scrub with six changes of sponges saturated alternately with each germicide until the skin is a rosy pink, indicating that you have removed most of the desquamating epithelium, and your single-shot germicides have been pushed down into the skin layers where the organisms are found.

Another problem in skin disinfection concerns superficial malignancy. A mechanical scrub such as I have described is too traumatic. Aqueous iodine over a soap lather, or iodine combined with a synthetic detergent, is good in cases of cancer of the breast, cancer of the lip, and other superficial malignancies—cases in which, if you really scrub and do a good job of mechanical removal, you also massage metastatic cells on their way.

There are several other areas in which atraumatic preps are helpful—the axilla, the scrotum, and the vulva, for example. Here suppression technics are very effective if the patient is available for a sufficiently long period of time. Otherwise an atraumatic prep is essential.

Then there is the situation—like the crushed hand, the open fracture—in which you have dirt, grease, and blood. I persist in using a slurry of calcium hypochlorite brushed on with a nylon bristle scrub brush for three minutes. This is shaved off with a sharp razor, taking care to shave away from the wound. The wound and the disinfected skin are rinsed freely with sterile Ringer's or saline solution.

That is as brief a description as I can give of background of skin disinfection, trying to orient the theory into every-day practice and to recommend several technics which you can use. I have tried not to mention names of germicides but rather the names of chemical families and groups. I think you will find in any of these groups or families there are eight or 10 or even

40 or 50 commercial products which qualify. All you have to do is read the labels to discover the active agent in them, and make up your own mind where they fit into the picture.

I think there is room for individual idiosyncrasy in the likes and dislikes of a surgical staff as to whether they prefer a colorless field or one that is stained. However, you never use an alcoholic germicide when you anticipate using a cautery, because the alcohol-saturated drapes give off alcohol vapor which can be ignited by the cautery. Many burns along the side of the flank that are blamed on tincture of iodine are actually thermal burns, resulting when the alcohol vapor under the drapes has caught fire. There is a flash of colorless flame when the cautery is used. You can identify a burn from this source because the nap on the blanket or textile is charred, and the patient has a typical second-degree burn. So, whenever you use the cautery, do not use a flammable solvent for your germicide, or use a flammable germicide.

There are many acceptable technics for skin disinfection all based upon—

(a) Suppression of bacteria

(b) Mechanical scrubbing to keep the skin in good condition

(c) Coupling the shave and the disinfection as closely to the operation as possible

(d) Remembering that whenever you have a respiratory infection, your hands are teeming with organisms which are out of control, and you have no place in the care of the patient. You should become a patient yourself and get your hands safe, rather than spread havoc among people who are asking for help and not for a handicap.

Question and Answer Period

Q. Does the preparation of the skin have anything to do with the formation of keloids?

A. No. Keloid formation is an individualistic response to healing which is characteristic of some individuals. It probably is more characteristic of their response to stress and the general stress reaction than anything else. It is over-response to healing. Some people do not have it every time. As you deplete the stress reaction in second and third operations, for example, the keloids do not form to as great a degree as in the first operation in a series.

Q. An area is painted with dyed Zephiran to delineate it and then scrubbed with Phisohex. Is the Zephiran film destroyed?

A. I think the Zephiran is effectively removed from the area, leaving instead an area in which the skin has adsorbed a bacteriostatic agent—hexachlorophene. I think the correct way to use the combination would be just the reverse of what you propose.

Q. What is the best routine skin prep?

A. There is no "best routine." You have to define your patient's problem. Some of them have elective procedures in which you use suppression. Others are unplanned procedures in which you have to use mechanical means plus the detergency plus germicides. Others are bleeding and traumatized, and you have to depend chiefly on chemical effect—calcium hypochlorite, for example—and you take three minutes of careful scrubbing to really do the job. This is not advantageous, because the hypochlorite has an odor which the surgeon does not like on his hands. It bleaches and tends to destroy textiles, but for that patient, that happens to be a small price to pay to rid his skin and wounds of organisms which may be dangerous.

One other comment I would like to make is that you soon learn in studying skin disinfectants that patients who have had antibiotics preoperatively have no problem, because the antibiotics suppress the bacteria of the skin very effectively, except in the hospitalized patient whose skin is teeming with antibiotic-resistant organisms.

The fellow who has been in for a colostomy prior to a sigmoid resection, the fellow who has been in with one or two or three operations planned—plastic surgery and so on—usually has a skin teeming with resistant hospital organisms. These are dangerous and have developed antibiotic resistance, and suppression technics are very important in this group.

Q. Does alcohol destroy the action of G-11?

A. Alcohol will leach the hexachlorophene out of the skin, away from the bacteria, but that does no harm because at the time you're using it, the bacteria are suppressed. You are going to apply hexachlorophene subsequently. The alcohol may destroy organisms in the dirt under the fingernails, for example, or dirt embedded in the skin of your palm, which the hexachlorophene will not affect. Zealots and purists in this area apply hexachlorophene in isopropyl alcohol and have both effects. There is something queer about being a purist, though, because germicides are bacteria-selective, not only in germicidal effect but also in detergent activity. You alternately use a cationic and an anionic agent which provide more penetration than either does alone, because the cationic dissolves the keratin between the cells, loosening them. The anionic detergent helps to roll off this loosened debris, which neither the cationic alone nor the anionic detergent will do. So you can combine these agents and enhance the effect.

The same is true of bacteria. Some germicides are highly selective and destroy only a few groups of organisms. Others have blind spots in their activity. One or two organisms escape destruction—for example, *Staphylococcus albus* and the quaternaries. If you use something other than the quats, you might destroy the *Staphylococcus albus*. This is why the isopropyl alcohol and the quaternary ammonium combination is good, because one really gets after the *Staphylococcus albus*, and the other gets after everything else.

So there is an advantage in shifting and not being a purist.

Q. Do women's faces have dangerous organisms?

A. Most women's faces have been so well cared for that they can be incised without any danger. But never operate on a lady with a runny nose.

Q. How about using tincture of green soap and ether?

A. The green soap is useless. It is a poor detergent; it deposits the alkali earth into the cells. Ether is an explosion hazard which should not be tolerated, and it does nothing for the prep.

Q. Do you think hexachlorophene should be used by ward nurses?

A. I think it a wise idea for all hospital personnel to do this to make their skin safe.

(Continued on page 82)

Mr. Copeland

Job Satisfaction*

By. C. E. Copeland
Administrator
Missouri Baptist Hospital
St. Louis

● Job satisfaction has always been a challenge to me, because we no more than get started in that field than we come face to face with the tremendous subject of human relations, and there's an almost inexhaustible amount of research that we can do when we try to find out what people are thinking and what makes them "tick."

It's hard to anticipate what anybody's going to think about any given thing, because people's reactions are so entirely different. People respond in so many different ways to the same thing.

When we start talking about job satisfaction, the first problem that confronts us is the development of an organizational chart. We're told that we must have a chart. We need to know specifically where everybody fits in and who's responsible for whom, and who's going to supervise whom, and the line of authority runs straight up and down. It's called the perpendicular line of authority, and everybody is pin-pointed right where he ought to be. And we say, "That's it." That's what we need. When we get that set up, we're getting somewhere.

To the amazement of everyone, we frequently get into the program and immediately find that this perpendicular line of authority runs contrary to what's known as a horizontal line—which can ruin our perpendicular organizational chart and make it completely ineffective.

The horizontal line is concerned with folks who are not particularly interested in the up-and-down line. For instance, listening to the conversation of two operating room nurses and perhaps a couple of anesthetists, we might hear one of them say: "Did you see that chart? I'm scheduled to be on call tonight; but I've got a heavy date, and believe you me, they're going to have some trouble finding me."

The thing running crosswise completely upsets the thing going up and down, and we have to admit that it just doesn't work that way, people being what they are.

We predicate these perpendicular lines on the idea that people are going to be controlled by intelligence and logic. Lo and behold, they're controlled entirely by emotion and sentiment, and those things entirely preclude these organizational lines of logic and intelligence.

What is it, then, that promotes job satisfaction? Contrary to the opinion of a great many people who think it's money, we find that, after a great many surveys involving thousands of employees, experts have come up with the answer that it isn't money at all. There are many other more important factors. Pay is rated in fifth place—four other things are considered more important. Before discussing those four, I'd like to consider the role of the supervisor.

What does it take to make a good supervisor? A good supervisor fundamentally must be "people-conscious"—interested in people. We in the hospital field so often make the mistake of promoting a professional person, such as a nurse, on the basis of technical skill and technical knowledge, and fail to determine whether

(Continued on page 82)

*Presented at the Second Annual Conference, Association of Operating Room Nurses, St. Louis, January 24-27, 1955.

The O.R. Problem Clinic

by EDITH DEE HALL, R.N.

Hospitality in the Operating Room

● As I look back over my visits to a large number of hospitals, I find myself looking forward to visiting many more. No matter how keen my interest this would not be true but for the friendliness and hospitality extended to me, particularly by Operating Room nurses. This has been my personal experience but I have made many observations along the way and have found much to be desired in hospital hospitality. This article will be confined, however, to hospitality in the Operating Room.

Although you may not agree, there is a need for hospitality in the O.R. just as there is at the information booth, in the nursing office, and elsewhere in the hospital. Too often this responsibility is dismissed with the excuse that there is no time for such trivialities. Strange as it may seem, to be friendly and hospitable requires no more time than to be unfriendly and discourteous. It would be ideal if we could enjoy the luxury of trained receptionists, but since this is usually impossible we must meet the situation realizing that there is much to be gained and our efforts will be rewarded if we are hospitable.

I like to think that Operating Room nurses, in general, are getting to know each other and that the AORN is partly responsible. In many communities a link between hospitals has developed by O.R. nurses making friendly contacts, broadening their views, stretching their sights and working to solve mutual problems. This is a very healthy, forward going movement which has its beginning in good fellowship. In order to appreciate the value of this let us observe what happens in the absence of hospitality.

Consider, for example, the O.R. nurse who wishes to visit the Operating Room Supervisor in a strange hospital. As a general rule when one of our profession enters through the proper channels with a proper introduction, she receives a reasonable amount of courteous attention. Just the opposite may be true, however, and the visitor is made to feel unwelcome. To antagonize visitors courts ill-will and it is not surprising if the visitor resents the affront and comes to the conclusion that the Operating Room Supervisor is insecure and unfriendly. Has this happened to you or have you been guilty of finding an excuse not to see a nurse visitor? Are you suddenly called to a conference or do you have an emergency that requires your undivided attention? Certainly there are numerous legitimate reasons why visitors cannot be seen at once. They are due a courteous explanation, however, and should be given an opportunity to wait and be seen by a member of your staff if not by you.

We are all aware of the importance of eliminating traffic in the Operating Room to prevent infections and a possible explosion. As visitors, nurses have the proper regard for surgical operations in progress and not one of us would be guilty of intruding or enter without permission and proper attire. Let us not forget that all Operating Room nurses "talk the same language." We have similar predicaments. No apologies are necessary for the appearance or state of affairs in an Operating Room—*we understand*. We are also quick to sense a feeling of warmth and friendliness and are just as alert to a rebuff.

If a nurse has taken her free time to visit another hospital it is evident that she has a sincere interest and may be in search of the answer to her problems. During her visit she may inadvertently share or leave ideas which may prove useful to others. Whether or not there is any great exchange of ideas there is value in establishing friendly relations.

In some instances Operating Room nurses in large hospitals and medical centers, feeling sufficient unto themselves, build a high wall which keeps others out and at the same time closes in their own problems. No matter how superior the technique it cannot survive on reputation alone. Just as a closed mind has a limited capacity so has a department headed by one who refuses to recognize changing needs and to be stimulated by challenging ideas. I believe that the Operating Room nurse who thinks she has all the answers is rare. No one can deny, however, the presence of those with a passive attitude who lack the ambition and desire to keep abreast of the times. Here we should recall a line from the Florence Nightingale pledge which reads, "I will do all in my power to maintain and elevate the standards of my profession." We are failing to either maintain or elevate the standards of our specialty unless we constantly make a joint effort to improve the quality of the service we render.

It is a fine thing to work in a community where Operating Room nurses are hospitable to each other, sharing their knowledge, viewpoints and experiences. Horizons are widened and although it may go unnoticed, a contribution to better relations between hospitals is made. With so many benefits resulting from hospitality let it not be said that Operating Room nurses are lacking in this desirable characteristic.

Don't Forget

3rd Annual Conference

ASSOCIATION OF OPERATING ROOM NURSES

Boston, January 30 — February 1, 1956

FIRST PROGRAM DETAILS NEXT MONTH

(Continued from page 79)

Q. How about shaving in the operating room?

A. I think shaving in the operating room is good bacteriology. It is humane, and it is done much more quickly and more easily by an expert, when the patient is anesthetized and properly exposed, than by a student nurse or orderly who hacks his way through an increasingly bloody field in the dark, terrifies the patient, makes him very sore, and then brings him into the operating room in such sad shape that you have to take a razor and do it again yourself.

Then, because you are so upset, you write a few notes and somebody gets bawled out—with the result that he hacks a little more thoroughly next time. In most hospitals this is no exaggeration. It is a bad deal for the patient. It is poor psychiatric care, very uncomfortable, and bacteriologically unsound.

There is nothing more satisfying than to learn how to whip a good straight razor across the field. It takes you two minutes, once you have done a dozen shaves.

REFERENCES

Conway, H., Stark, R.B., Climo, S., Weeter, J. C., and Garcia, F. A., "Surgical Treatment of Chronic Hidradenitis Suppurativa," **Surgery, Gynecology and Obstetrics** 95:455, 1952.

Lovell, D. L., "Skin Bacteria: Their Location with Reference to Skin Sterilization," **Surgery, Gynecology and Obstetrics** 80:174, 1945.

Price, P. B., "Bacteriology of Normal Skin," **Journal of Infectious Diseases** 63:301, 1938, published by the University of Chicago Press. Hufnagel, C. A., Walter, C. W., and Howard, R. W., "In Vivo Method for Evaluation of Detergents and Germicides." **Surgery** 23:753, 1948, published by the C. V. Mosby Co.

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(Continued from page 80)

that person is "people-conscious." This is the reason we frequently have poor supervision. People, because of knowledge of a job, technical skill, or length of service are put in positions of leadership, when actually they have no training or educational background whatsoever in the important field of human relations.

STATUS AND ROLE

We run into the problem of status and role. What do we mean by "status and role"? We find before we go very far that we are placed in various positions of status in the circumstances in which we live. For instance, at our hospitals and at our work we have a certain status. When we start to go home, if we get into an automobile, we assume the status of a driver, but if we park and walk across the street, we are immediately placed in the status of a pedestrian. When we get home, we have a particular status in our family life; and if we go to church, we find that we have still another status. So we find ourselves in a great many different situations involving our relationship with people.

Then we come to the matter of the role we play—what we do in our position of status. If we have a problem in supervising employees, a great deal can be done by "role playing." Very often it results in an entirely different attitude on the part of the employee, because she gets the supervisor's role and sees that it has its points, too.

As I mentioned earlier, one of our difficulties is that different people see things differently. The supervisor may be regarded by one of her employees as very efficient and capable, and by another employee as cold and indifferent. We find a supervisor trying to be kind to and considerate of her employees, and someone mistakes that for weakness and tries to take advantage of her. Sometimes the supervisor must be painfully severe—enough to prove to her employees that she isn't weak.

What do people really want? They are governed by emotions, they're controlled by sentiment; their actions are not determined by logic and reason, and we may just as well accept that. Well, then, what do they want?

First, physical security. By physical security, I mean health.

They want social security; they want to be accepted by other people. I think that's a phase of human relations we often overlook—the acceptance of people by other people on the same social level.

They want economic security.

They want emotional security. Often we overlook the fact that people want love and affection.

They want to feel important.

They want to have a part in making decisions. Are you just calling people together and saying, "Now we're going to do so and so?" They'll do it, but not with any degree of enthusiasm. But if you were to call them together and say, "We've got a problem—now let's work it out; I want to know what you think about this," they will be more eager to do the job.

If you're clever in your questioning and your presentation, your employees will invariably come up with the answer that you want, but they'll have a feeling of "belonging"; they'll have a feeling of being a part of the decision. Instead of its being "your" decision, handed down to them, it will become "their" decision, and they'll go along with it because they're a part of it; they had something to do with formulating the plan.

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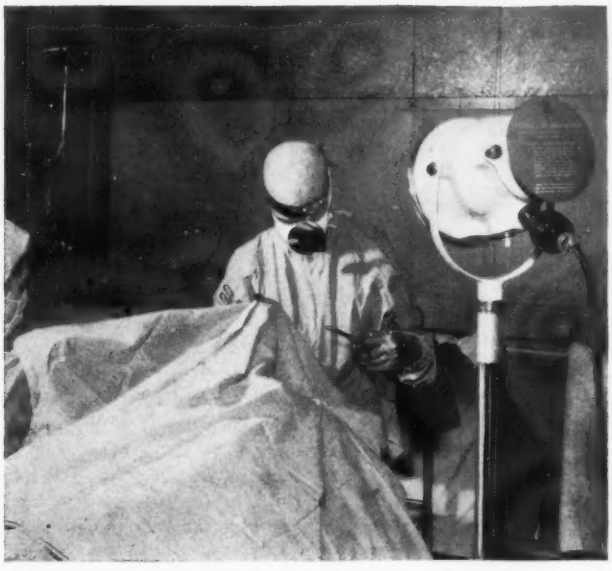

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20,300,000 in Hospitals During 1953—New Record

Last year United States hospitals cared for 20,345,431 patients — more than any previous year. This was an increase of 161,604 over 1953's total of 20,183,827.

There were 3,342,599 babies born in United States hospitals last year—a rise of 233,529 over the 1953 total of 3,109,070 hospital births.

United States hospitals spent $5,229,040,000 to care for the 1954 patients and newborn infants against a total expenditure of $4,765,063,000 in 1953, according to statistics compiled by the American Hospital Association.

Nonprofit general hospitals, which care for the majority of acute short-term cases in the nation, spent $22.78 every day for each patient in 1954. This represented an increase of $1.69 over 1953. The average cost per patient stay in these hospitals in 1954 was $171 compared with $160 in 1953. There was an increase of 107 percent in the cost per stay between 1946 and 1954.

NURSING SERVICE

More than 275,000 professional nurses provided service in hospitals in 1954. This included more than 245,000 hospital employees and nearly 30,000 private duty nurses. As compared with the 1953 data, the 1954 figures showed more than 6,000 additional practical nurses.

Nurse Anesthetists to Meet In Atlantic City

Delegates representing 7,600 nurse anesthetists from the United States and its territories, will convene in Atlantic City September 19-23 for the annual meeting of the American Association of Nurse Anesthetists.

The convention will open with an assembly of representatives from 105 schools of anesthesia for nurses. The 1955 class outline—a culmination of four years of study and research—will be distributed to school directors and instructors.

The outline is the end product of a series of school directors' workshops which the association has been conducting since 1952, to determine what subjects should be taught in schools of anesthesia and why, and how and when the subjects should be presented.

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Sterilization of Supplies*

Part I-Sterilization by Chemicals

By Velma L. Chandler, Ph.D.**

My first suggestion is that you read the labels when you're considering new chemical sterilizing agents. Don't be misled by what an enthusiastic salesman has to say, or be guided in your purchases by a penny-pinching purchasing agent. Read the labels!

There are federal agencies which control the claims made for all those agents. Read the labels, read the brochures, and then you will know in which situations they can reliably be used.

If you don't understand the bacteriologic data that are presented, go to your bacteriologist. He will be able to help you. Having obtained the information to validate the claims made, you will have a much better basis for a rational use of chemical agents.

Although we have many qualms about chemical sterilizing agents, we do realize there are situations in which they must be used. One must recognize their limitations and use them rationally.

An ideal chemical sterilizing agent provides complete and rapid destruction of all micro-organisms, is non-irritating and noncorrosive, is active in the presence of organic matter, and is economical. (See Figure 1.)

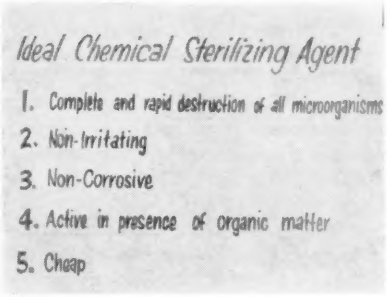
Ideal Chemical Sterilizing Agent
1. Complete and rapid destruction of all microorganisms
2. Non-Irritating
3. Non-Corrosive
4. Active in presence of organic matter
5. Cheap

Figure 1

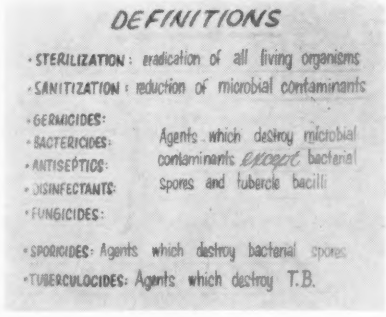
DEFINITIONS
• STERILIZATION: eradication of all living organisms
• SANITIZATION: reduction of microbial contaminants
• GERMICIDES:
• BACTERICIDES:
• ANTISEPTICS:
• DISINFECTANTS:
• FUNGICIDES:
Agents which destroy microbial contaminants EXCEPT bacterial spores and tubercle bacilli
• SPORICIDES: Agents which destroy bacterial spores
• TUBERCULOCIDES: Agents which destroy T.B.

Figure 2

It is also desirable that the agent be nonstaining and that it have either a pleasant odor or no odor.[1]

For the purposes of discussion, I would like to define sterilization as the complete destruction of all micro-organisms, and sanitization as a reduction in the number of micro-organisms.[2] The terms "germicide," "bactericide," "antiseptic," "disinfectant," and "fungicide" we shall consider as agents which destroy microbial contaminants, *except* bacterial spores and the tubercle bacillus. (See Figure 2.)

Sporicides are agents which destroy bacterial spores, and tuberculocides are those chemical agents which destroy the tubercle bacillus.

I think that Figure 3 gives a little better idea of what we are fighting with all of these chemical sterilizing agents. The artist has depicted the use of a germicide and the effectiveness of it. On the left are the common

(Continued on next page)

*Transcript of discussion presented at Second Annual Conference, A.O.R.N., St. Louis, January 24-27, 1955.

**Dr. Chandler is chief, department of microbiology, Ethicon, Inc., New Brunswick, N. J.

[1]It should also be effective against organisms coated with oil, grease, and fat.—ED.

[2]"Sanitization" more generally implies the destruction of vegetative organisms only.—ED.

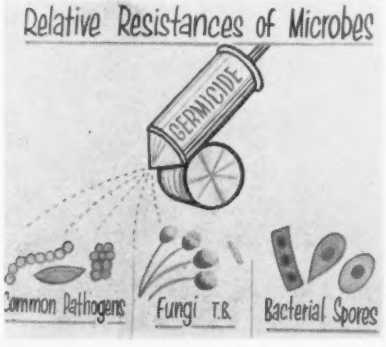

Figure 3

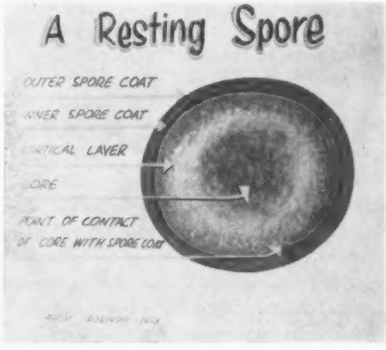

Figure 4

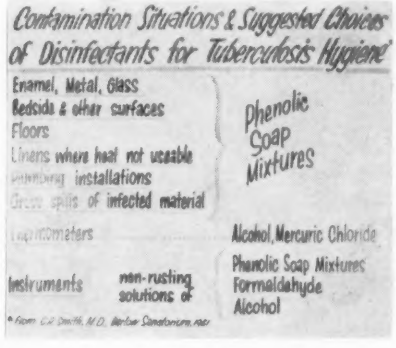

Figure 5

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pathogens, the non-spore-forming bacteria. They are readily knocked out with almost any of the hundreds of germicidal agents on the market today. If you're trying to combat that single type of organism, almost any agent is effective.

More resistant to germicides are the fungi and the tubercle bacilli.

The highly resistant forms are the bacterial spores. They are shown in the picture contained within the bacterium itself, but the cytoplasm on the outer portion of the bacterium disappears, and the darker center part remains as the spore. As far as resistance to any destructive agent is concerned, there is nothing that is harder to destroy than bacterial spores. They are the most resistant of living forms.

Figure 4 shows you a cross section of a bacterial spore. Chemists have attempted to analyze these spores and to determine why they are so resistant. The only conclusion is that they contain more calcium than do the vegetative forms of the bacteria, but apparently not enough to explain their resistance to chemical agents and heat.

Many of you are interested in agents for use in decontamination of tubercle bacilli. C. Richard Smith, M.D., of the Barlow Sanitarium, published, in *Soap and Sanitary Chemicals*, September-October, 1951, data recommending phenolic soap mixtures. For thermometers he recommends alcohol and mercuric chloride, and for instruments, nonrusting solutions of the phenolic soap mixtures, formaldehyde, and alcohol. (See Figure 5.)

There are differences in the resistance of sensitive cells, average cells, and tough cells, all of which occur in a given population of bacteria, to chemical agents and to heat. We must combat the tough cells. (See Figure 6.)

There are several factors which affect germicidal efficiency, and there must be an optimum balance to effect killing as shown in Figure 7. The concentration of the agent must be correct; the temperature of the chemical agent must be considered. Most chemical agents are more effective if the temperature is raised. In actual use, it is seldom practical to elevate the temperature, but even a slight temperature rise will result in more efficiency. Another factor is reaction, or pH, the acidity or alkalinity of the mixture.

A very important factor is exposure time. You will find, if you carefully read the brochures and the labels ac-

(Continued on page 88)

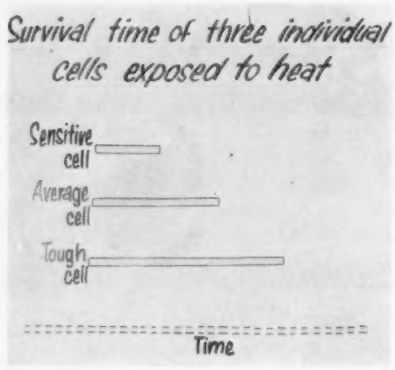

Figure 6

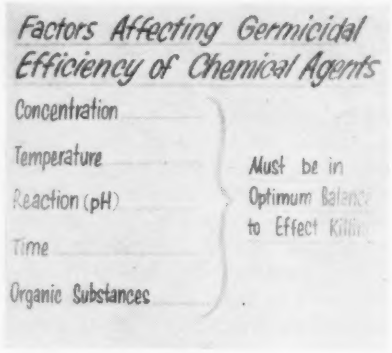

Figure 7

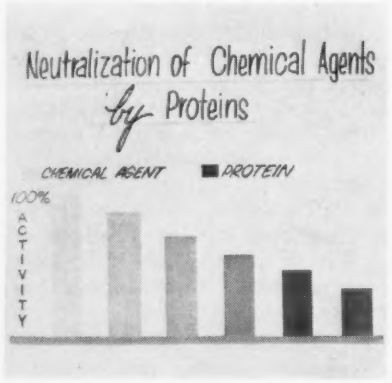

Figure 8

Figure 9

(Continued from page 5)

Aspirin Preferred Analgesic in Rheumatoid Arthritis

Aspirin is the analgesic of choice in treating rheumatoid arthritis, and, combined with rest and physical therapy, still constitutes the basic approach in managing the condition, according to a panel discussion in *California Medicine* (82:367, 1955), by Engleman, Weinberger, Sacasa, Headley, Davison, Mettier, and Rhinelander.

Aspirin not only has proven analgesic activity in rheumatoid arthritis but "has a definite effect on the connective tissues involved in the disease," Davison stated. He recommended a dose of 15 grains every four hours during the day.

Various combinations of salicylates and other drugs, notably para-aminobenzoic acid, have failed to demonstrate greater effectiveness than aspirin, the panel agreed. They also concurred in preferring a conservative program of treatment, including aspirin, rest, and physiotherapy, in the early stages of the disease. They advised against the use of steroid drugs until it is determined that the condition is progressive, because of the danger of severe reactions and the expense to the patient.

Treatment of Severe Coronary Shock

Severe coronary shock following acute myocardial infarction can be most effectively controlled with levarterenol, according to a group from the VA Hospital, Los Angeles, and the University of California School of Medicine.

Comparing the relative merits of various therapeutic measures in 82 patients with severe coronary shock, Binder, Ryan, Marcus, Mugler, Strange, and Agress report in the *American Journal of Medicine* (April, 1955) that Levophed (levarterenol) proved to be the drug of choice. All patients suffered from peripheral circulatory collapse. Elevation of blood pressure was obtained in 92 percent of 25 cases given Levophed infusions. Forty-eight percent were relieved of shock, and 32 percent survived the underlying condition.

Nonspecific therapy, consisting of morphine sulfate, oxygen, and general nursing care, was used on 22 patients. Thirty-five were administered blood or plasma and one of a group of vasopressor drugs. An additional 20 percent of these patients may be saved with the use of Levophed as against no specific therapy, the authors say. Neither intravenous nor intra-arterial transfusions alone reduces the mortality rate in severe coronary shock, they add.

Combining data from other studies, the authors report use of Levophed resulted in obtaining a pressor effect in 83 percent of 106 cases. Fifty-four percent were relieved of shock, and 42 percent survived. In one series of the combined reports, there was a pressor response in all patients and all survived.

Isuprel, administered parenterally when heart block was present, significantly potentiated the pressor response of Levophed, apparently by increasing a previously low ventricular rate.

Aspirin Called Valuable in Idiopathic Pericarditis

Aspirin sometimes has a beneficial and even dramatic effect in the treatment of idiopathic pericarditis, according to Dressler in the *American Journal of Medicine* (April, 1955).

Reporting on 42 episodes of the condition in 12 patients, the author states that the outstanding clinical features are pain and fever, and that aspirin's therapeutic value in some cases, plus other aspects observed in idiopathic pericarditis, suggest rheumatic activity is linked to the etiology of the condition.

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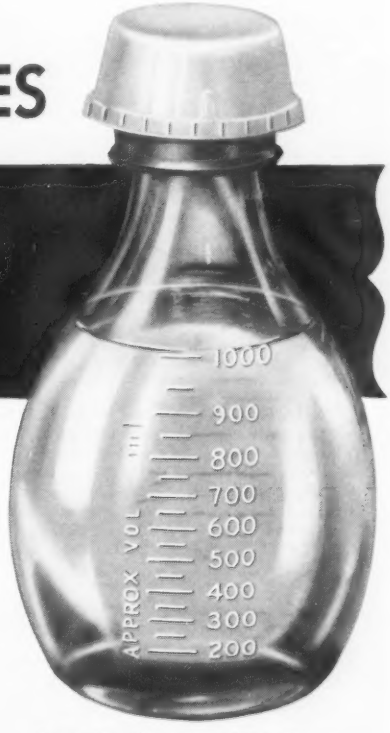

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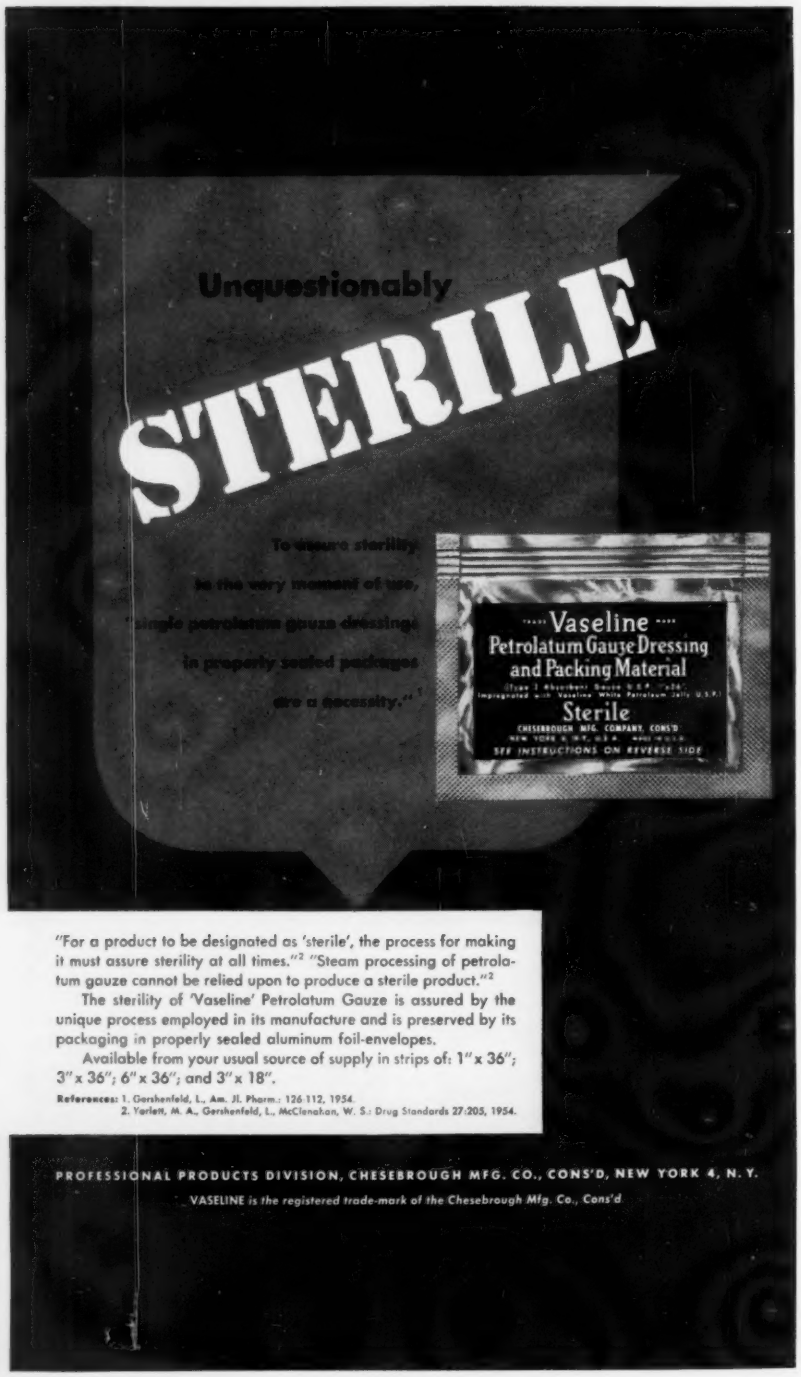
(Continued from page 86)

companying these agents, that the manufacturer tells you the required exposure time.

Finally, there must be a minimum amount of organic substance present —that is, blood, pus, or tissue, since the protein combines with the chemical agent, neutralizes it, and reduces its efficiency. (See Figure 8.) This points up the fact that one must have thoroughly clean instruments, syringes, etc., for the chemical agent to work upon the organisms.

Another important reason for ridding instruments of the proteinaceous material prior to sterilization, as I have described, is that organisms are protected by the protein within crevices and hinges. No chemical agent can destroy bacteria unless there is direct contact. I would like to emphasize the extreme importance of good, thorough mechanical cleansing of glassware and instruments. (See Figure 9.)

Wherever heat can be used, use heat. It is the best sterilizing agent. Don't try to take short-cuts. It's those bacterial spores we have to fight, and we have to pretend they're always with us.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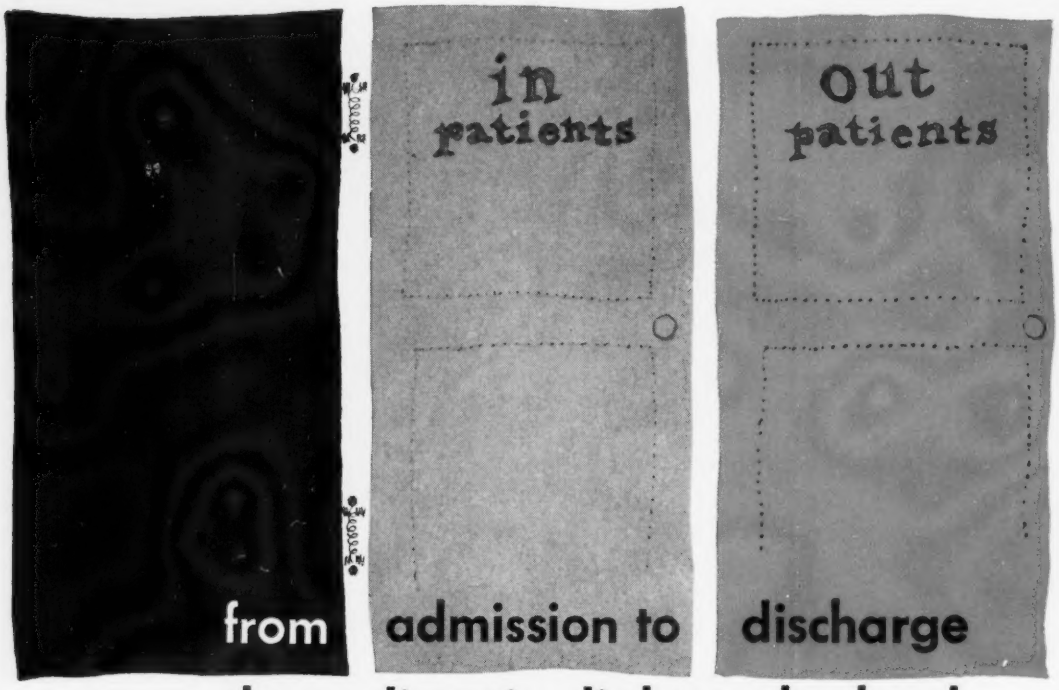

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